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ABSTRACT

The final report of Project LINC (Learning in Integrated Classrooms), a training program for 3-to-6-year-old mildly and moderately handicapped children, discusses the accomplishments of the 3-year project. It is explained that the project developed and refined teaching strategies, skills, and support systems for classroom teachers and programs for parents of children integrated into mainstreamed classrooms. The main portion of the document details the accomplishments in the areas of direct and supplementary services to children, parent/family participation, assessment of children's progress, inservice training and evaluation of teaching staff, dissemination and training, coordination with other agencies, and continuation of services. Among appendixes are a sample tutorial report, parent questionnaires, and figures relating to the assessment of children's progress. (PHR)

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Final
Program Performance Report
and
Third Annual Interim Report

PROJECT LINC

LEARNING IN INTEGRATED CLASSROOMS

Eliot-Pearson Children's School

Department of Child Study

Tufts University

OEG - G00 - 75 - 00230

July 1, 1975 - June 30, 1978

Submitted to:

Handicapped Children's Early Education Program
Bureau of Education for the Handicapped
United States Office of Education
Donohoe Building, Room 3123
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Washington, D.C. 20202

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INTRODUCTION AND ACKNOWLEDGMENTS

This report constitutes the Final Report for Project LINC and the third annual report, covering the year 1977-78. All of the quantitative data that are reported in this document concern 1977-78, unless otherwise noted. The intent of this report is to indicate the accomplishments of the Project within the context of the entire three-year cycle of Demonstration and Dissemination funding. Consequently, portions of this report are drawn from the two previous interim reports presented to BEH in 1976 and 1977.

This document reflects the efforts of many people. Sarah Fujiwara and Roberta Pasternack contributed to Sections I and II; Martha Markowitz is responsible for the portions dealing with the Project's formal evaluation in Section III. She also collaborated with Anthony Bryk and with me in writing the paper that presents the Project's evaluation design. Finally, Lane Gunnoe prepared Section VI concerning Dissemination/Training.

In a more important sense, however, this document represents the cooperative efforts of the entire Project staff during 1975-78. Every person contributed in some significant way to the development and implementation of this project. The staff of the School and the Project included: Samuel Braun, Steven Brown, Virginia Chalmers, Patrick Cunningham, Sarah Fujiwara, Mary Jane Gibson, Jane Greenspan, Lane Gunnoe, Ann Handman, John Hornstein, Timothy Johnson, Martha Keller, Shirley Lewis, Florence Longhorn, Martha Markowitz, Karyn Matonis, Barbara McDonald, Gail Michael, Carly Moreno, Roberta Pasternack, Susan Phillips, Gerald Phinisee, Mags Quain, Jean Seigle, Arthur Sills, Barbara Smith, Cathy Spagnoli, Margery Staub-Shoukimas, Nancy Stone, Marilyn Stoops, Carol Troyer-Shank, and Michael Woodard. Special thanks go to Dorothea B. Marsden who was Associate Director of the Children's School during the grant period. Her leadership and conscientiousness were fundamental to the Project's impact and success. Finally, we wish to acknowledge our gratitude to Tufts University and in particular, to the Department of Child Study and to Evelyn G. Pitcher, Chairman of the Department preceding and during the period of the grant, for their willingness to allow innovation to take place in the Children's School and for their significant support for the permanent changes which have taken place in our program.

Samuel J. Meisels, Ed.D
Project Director

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DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION
WASHINGTON, D.C. 20202

PROGRAM PERFORMANCE REPORT (Discretionary Grants)

FORM APPROVED
OMB NO. 51 R1091

Further monies or other benefits may be, but will not necessarily be, withheld under this program unless this report is completed and filed as required by existing law and regulations *(45 CFR 121 GSA FMC 74-7).*

Part I

All grantees with awards from programs listed under "General Instructions" above respond.

1. Date of Report: October 15, 1978

2. Grant Number: G00-75-00230

3. Period of Report: From: July 1, 1977 To: June 30, 1978

4. Grantee Name and Descriptive Name of Project:

Project LINC - Learning in Integrated Classrooms
Eliot Pearson Children's School
Department of Child Study, Tufts University, Medford, MA 01255

Certification: I certify that to the best of my knowledge and belief this report *(consisting of this and subsequent pages and attachments)* is correct and complete in all respects, except as may be specifically noted herein.

Typed Name of Project Director(s) or Principal Investigator(s): Samuel J. Meisels, Ed.D.

Signature of Project Director(s) or Principal Investigator(s): Samuel J. Meisels

Part II *("Accomplishment" Reporting)*

PART TWO

I. DIRECT AND SUPPLEMENTARY SERVICES TO CHILDREN

A. Accomplishments

1. Number of children served. The program at Eliot-Pearson is an integrated, or mainstreamed, program. Children with a wide range of handicapping conditions that fall within the mild to moderate range of severity are fully integrated into each classroom.

During 1977-78, eighteen children with special needs were integrated into the five Eliot-Pearson classroom groups. They shared these classrooms with 72 non-handicapped children. The enrollment was as follows:

Group	Normal Age Range	Days and Hours	Total Number of Children	Number of Handicapped Children
3-Day	2.9 - 3.5	M.W.F. 9:00-11:30 AM	14	3
4-Day	3.0 - 4.0	M.T.Th.F. 1:00-3:30 PM	20	4
4-Day	3.5 - 4.5	M.T.Th.F. 1:00-3:30 PM	18	5
5-Day Kindergarten	3.5 - 4.5	M. - F. 9:00-11:45 AM	18	3
Kindergarten	4.9 - 6.0	M. - F. 9:00-11:45 AM	20	3
			90	18

The following roster lists all of the 1977-78 special needs children, gives their date of birth, sex, handicapping condition, classroom group, direct and supplementary services, and school plans for 1978-79. Identifying letters are used to preserve confidentiality.

During the three year duration of the Project, sixty-four children with special needs received services during the full-year program of the Children's School.

ELIOT-PEARSON CHILDREN'S SCHOOL

Roster of Special Needs Children
1977-78

Child	Sex	D.O.B.	Handicapping condition	Classroom group	Direct service to child in addition to participation in regular classroom program	Direct service to parents	School Plans for 1978-79
A	M	5/1/74	Cystic Fibrosis	3 Day	None (home tutoring was to be available if A were absent for any extended period).	Parent support group. Joint observation of in school	Eliot-Pearson 4 Day
B	M	12/11/74	Crippled	3 Day	Home tutoring		Eliot-Pearson FGI
C	M	7/22/74	Legally blind	3 Day	Home tutoring School tutoring	Parent support group, Commission for the Blind consultation	Eliot-Pearson 4 Day
D	M	12/30/72	Developmentally delayed	4 Day 3S	Movement Group	Parent support group (Mother attended both groups)	Eliot-Pearson kindergarten
E	M	5/27/74	Blind	4 Day 3S	Itinerant teacher SEAM collab.	Art and Mag's parent group, Commission for the Blind consultation.	Eliot-Pearson FGII
F	F	4/4/72	Downs Syndrome	4 Day 3S	Home tutoring first semester, movement group, cooking (language) group	Parent support group	Special needs class -- Wayland public school or TEC collaborative

Roster of Special Needs Children - page 2

Child	Sex	D.O.B.	Handicapping condition	Classroom group	Direct service to child in addition to participation in regular classroom program	Direct service to parents	School plans for 1978-79
G	F	5/29/73	Emotional adjustment; learning disability	4 Day 3's	Creative movement group	Individual conferencing with **Special Needs Resource Teacher**	Methodist weekday transition class
H	M	1/8/72	Primary attentional disorder	4 Day 3's	In school tutoring	Parent support group	Shady Hill kindergarten class
I	M	6/7/73	Hyperactive	4 Day 4's	Home tutoring	Individual parent conferences	Eliot-Pearson kindergarten
J	F	12/13/72	Cytomegalic inclusion disease, seizure disorder, delayed development	4 Day 4's	Home tutoring, movement group	Parent support group	Medford P.S. collab. special class
K	F	5/16/73	Developmentally delayed	4 Day 4's	Movement group, cooking group (language)	Parent support group	Eliot-Pearson kindergarten
L	M	5/3/73	Speech and language	4 Day 4's	Home tutoring, cooking group (language)		Somerville P.S. kindergarten

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Roster of Special Needs Children - page 3

Child	Sex	D.O.B.	Handicapping condition	Classroom group	Direct service to child in addition to participation in regular classroom program	Direct service to parents	School plans 1978-79
M	F	12/24/71	Emotional disturbance, possible neurological impairment	5 Day	Home tutoring, creative movement group	Parent support group	Eliot-Pearson 4 Day 5's
N	F	10/22/71	Alcoholic Fetal Syndrome -- mental retardation	5 Day	Home tutoring, creative movement group		Medford P.S. kindergarten and resource room
O	M	7/5/72	Cerebral Palsy, left hemiplegia	5 Day	Making things (fine motor), creative movement group	Parent support group	Lexington P.S. kindergarten
P	M	5/18/72	Malignant astrocytoma of the cerebellum	kindergarten	Making things (fine motor), creative movement group	Ongoing individual conferences with Special Needs Resource Teacher	Medford P.S. kindergarten and Resource Room
Q	F	6/27/72	Mild developmental delay, speech impairment	kindergarten	Home tutoring, creative movement group	Individual conferencing with Special Needs Resource Teacher	Somerville P.S. kindergarten and Resource Room

Roster of Special Needs Children - page 4

Child	Sex	D.O.B.	Handicapping condition	Classroom group	Direct service to child in addition to participation in regular classroom program	Direct service to parents	School plans for 1978-79
S	M	7/1/71	Cerebral Palsy, Spastic Diplegia	kindergarten	Making things (fine motor)	Parent support group	Medford P.S. 1st grade and Resource Room
T	F	5/15/71	Slow learner	kindergarten	Creative movement group	Individual conferencing with Special Needs Resource Teacher	Winchester Public School

2. Direct Service: Classroom Program

a. Rationale. The program at the Children's School represents an integrated, or mainstreamed approach to educating young children in open-structure classrooms. The rationale for this program has been systematically set forth elsewhere (Meisels, 1976; Meisels, 1978); it will briefly be reviewed here.

The program at the Children's School has been in the process of development and change for several years. To implement a mainstreamed program is, *ipso facto*, to work with change. The program objectives must change to accommodate to the special needs of the handicapped child; the teacher must alter his or her process of curriculum development and classroom management in order to accommodate a wider range and greater diversity of educational needs and experiences; handicapped and non-handicapped children undergo changes in outlook, expectations and behavior in the process of assimilating to the demands of the program and to each other's needs. This process of adaptation - of assimilation and accommodation - is fundamental to the education of handicapped children in heterogeneous groupings. Although all education is adaptive in some respect, in the newly mainstreamed classroom the parameters of this process are laid bare. In subsequent sections of this report, several of the parameters of this process of change will be identified.

The type of classroom organization utilized at Eliot-Pearson can be described as open education or open structure. These classrooms consciously reflect a cognitive-developmental approach to teaching and learning. Based on the thought of Dewey and Piaget, this approach has been explored and refined by Kohlberg (1970, 1971, 1972), Kamii (1970, 1972), and others (Anastasiow and Mansergh, 1975; Kohlberg and Mayer, 1972; Weikart, *et al*., 1971).

The cognitive-developmental model is basically an interactive approach to teaching and learning. It is distinguished on the one hand from maturationist theories (e.g., Gesell) and on the other hand from environmental learning or behaviorist theories (e.g., Watson, Skinner, Bereiter and Engelmann). The cognitive-developmental view holds that a child's development is based on the types of interchanges that take place between the child and the environment.

This approach calls for a classroom setting which stresses activity, experience, and a systematically adaptive role for the child vis à vis his environment, his peers and his teachers. These classrooms are not settings in which children are principally trained to conform to certain patterns of thought or specific cultural conventions. Rather, education of the whole child is conceived of as resulting in the restructuring of the child's patterns of thoughts and interests. In Kohlberg's words,

> what education is about is the construction of an environment in which a child interacts with people and things in a way that leads to a transformation in the structure of his thinking and judgment...
> (Kohlberg, 1972, p. 63)

Thus, this approach is actively concerned with the growth, development, and transformation of the child's internal thought processes and operations. Anastasiow and Mansergh have noted that "the critical difference" between cognitive-developmentalism and behaviorism is "how much beyond the behaviorist the cognitive developmentalist wishes to speculate about the internal life of the child" (1975, p. 311).

At Eliot-Pearson, we are indeed prepared to speculate about and develop programs relevant to this "internal life." In our approach, the affective elements of the child's experience are accorded at least as much attention as the cognitive aspects. In fact, these two realms are seen as largely inseparable. One psychologist whose work has successfully integrated cognitive and affective, or personal-social, development is Robert W. White. His work, which focuses on the concept of competence, provides an insight into some of the fundamental assumptions of the program at Eliot-Pearson. White defines competence as "an organism's capacity to interact effectively with its environment" (1959, p. 297). His thesis is that this capacity is acquired slowly. It is not "given" by maturation, nor is it controlled solely by drives or instincts. In White's words, competence is achieved through an assimilation-accommodation pattern directed towards the environment. What this means is that a child acquires competence through his activity in the world -- through "grasping and exploring, crawling and walking, attention and perception, language and thinking, manipulating and changing the surroundings..." (pp. 317ff). To the extent that the "results" of these explorations, activities, and manipulations are preserved by learning, "they build up an increased competence in dealing with the environment" (p. 321).

A number of parallels exist between open-structure cognitive-developmental theory and White's model of learning. Both White and the cognitive-developmentalists emphasize the positive effects of free play and both make provision for freely structured manipulation of the environment. They both subordinate the importance of the effects of maturation and external controls to the child's own exploration and control of the environment. Both approaches conceive of development as evolving from the child's transactions with the environment as a whole, rather than from some critical or particular experiences. Also, both would agree that children explore what they are interested in, and that their interest is most effectively aroused and sustained when their actions produce effects or changes in the stimulus field. Moreover, since effectance motivation subsides when a situation's possibilities for exploration have been exhausted, White would concur with the emphasis in open education on a rich variety of materials - materials that are manipulative and materials that are considered to be intrinsically rewarding.

At Eliot-Pearson this model has been used successfully in our mainstreamed program. In order to apply the open-structure/cognitive-developmental model to the education of handicapped children, however, the typical conception of "open education" has to be modified. Rather than embracing superficial interpretations of this approach which solely emphasize the child's freedom of choice, an abundance of materials and a passive, "facilitating" teacher, the Children's School's definition is considerably more directive and rigorous. The essence of the Children's School's conception of open education is the interactive relationship and joint decision-making of teacher and child. Many educators assume a zero-sum situation when they consider activity and control in learning settings. Either the teacher takes the initiative and controls the direction of the classroom or the child does. To the extent that one relinquishes control, it becomes available to the other. At the Children's School, learning is seen as an interactive and additive process, in which both children and teachers participate in framing objectives and implementational strategies for the classroom.

b. Description of Program. In general, teachers at the Children's School seek to maximize children's interactive experiences within three broad domains: interactivity with the physical environment, interactivity with peers and interactivity with adults.

The physical setting in which this program takes place is composed of a variety of differentiated learning centers or interest areas. Among the areas represented in most classrooms are the following: sand, water, painting, collage, blocks, woodworking, plants and animals, math, manipulatives, reading, writing, climbing, fine and gross motor activites, dress-up, kitchen and snack. Outdoor play is also given a great deal of attention. Classroom time alternates between periods in which children can make choices for themselves among all these areas, and periods in which children are asked to work at a specific task or specified location in the classroom. An objective set by all teachers early in the school year is to teach children to make choices.

The program for all children at Eliot-Pearson is highly individualized. On the basis of information acquired on each child in standard ways as well as infomation informally acquired during the process of teaching, the teacher establishes objectives for each child. The following ten objectives generally receive the greatest amount of attention by Children's School teachers. Listed in terms of highest to lowest frequency, they are:

1. To develop the ability to express one's feelings;
2. To increase the ability to make a friend;

3. To increase exploration and mastery of a wide range of curriculum experiences;
4. To increase positive interactions with peers;
5. To develop a sense of independence and self-confidence;
6. To accomplish successful separation;
7. To improve pre-reading and early reading skills;
8. To establish positive relationships with teachers/adults
9. To increase the ability to attend;
10. To acquire skills of group participation.

All children - handicapped and non-handicapped - were engaged in individualized programming designed to achieve some or all of these objectives. In addition, many other areas of development were addressed in the course of the year. The program at Eliot-Pearson is not deficit-oriented. Thus, teachers continually seek to expand and extend the range of interests and abilities exhibited by children by utilizing the resources of the interest areas listed earlier.

Given the individualized nature of the Eliot-Pearson program, the daily schedule in each classroom serves only as a general framework for the organization of each child's experience. The individualized programs developed for each child provide the major cohesiveness in the classroom. A typical morning kindergarten program might reflect a schedule such as the following:

9:00 - 9:20 - outdoors
9:20 - 9:30 - class meeting
9:30 -10:45 - independent and small group work time at interest areas
10:40 -10:45 - clean up and transition
10:45 -11:00 - quiet time (reading, stories, puzzles, etc.)
11:00 -11:20 - outdoors
11:20 -11:45 - group time: songs, music and story

Within this framework individual programs are implemented. In Section III below, examples are given of individual program planning and of the formulation of classroom outcome objectives.

c. Individualization and Program Planning. Individualization is a critical factor in mainstreaming, as well as a vital element in open education. Individualization refers to the practice of developing specific goals for individual children and specific implementational strategies for these goals. Although the same goals may frequently be held in common for several children, this does not mean that all of these children are expected to learn the same thing at the same time, nor does it mean that all children are expected to learn in the same way. This is particularly the case in mainstreamed classrooms. Appendix I contains a very sensitive report by a visitor to the Children's School which captures the spirit of this individualization.

In the open classroom, a teacher cannot claim to be individualizing instruction if (s)he does not have multiple, intentional strategies for teaching. This is the difference between individualized instruction and individual experience. The teacher who uses goals for the purposes of individualization takes the data of personal or intra-individual experience (the child's needs, abilities, moods, learning styles, and history) and uses them to help the child find a personally rewarding and productive way of learning.

Individualization thus plays a fundamental role in the integrated program at Eliot-Pearson. Taken as a whole, the structure of the classroom experience for children with special needs does not differ significantly from the structure of experience for non-handicapped children. Although supplementary services are provided only for special needs children, the fact that the program is individualized means that - to some extent - all children are treated differently.

The goals and objectives of the classroom program for handicapped and non-handicapped children overlap. The range of these goals and objectives reflects the range of interests and abilities exhibited by the children in the classroom. However, the actual choice, or variety, of different goals or subgoals does not reflect a qualitative difference attributable to the mainstreamed program. Within each of the three major domains or families of goals in use at Eliot-Pearson - Personal/Social Development, Cognitive Development, Motor Development - the classroom outcome objective selected interactively by the teacher may be applicable to any child in the classroom. As has already been noted, implementational strategies may differ widely between two different children even when the same outcome objective is in use. Thus, the classroom program is conceptualized by the teacher in much the same, individualized way for every child. There is no specific classroom curriculum for handicapped children. Rather, in some respect, every child has a specific curriculum. The charts presented in Section III, that identify specific goals and objectives for particular children, graphically display this educational approach. Also the specific illustrations in the documentation to be found in the next section give a sense of the level of individualization and the type of program planning that takes place in the classrooms.

d. Documenting the mainstreamed teaching process. It is a well-established fact that little empirical evidence has been collected concerning the effects of mainstreamed programs on young children (cf., Wynne, et.al., 1975). As a consequence of this situation, a number of studies reporting on the mainstreaming of young children are about to be published (Guralnick, 1978).

Although the need for valid empirical studies of early childhood mainstreaming studies must be addressed, it is equally important for practitioners to begin to articulate clearly the constraints and realities entailed by mainstreamed classrooms so that research can take place in potentially effective and successful settings. In this section documentation of what actually takes place in an integrated classroom will be presented. A number of specific adaptations required of teachers working in integrated programs will be identified in each of the following general areas: interactions between handicapped and non-handicapped children, adapting instructional strategies, and working with parents. Each general area is discussed in terms of a number of specific issues. These issues are critical, according to our experience, for understanding how a mainstreamed program is implemented. From extensive discussion and documentation on the part of the Eliot-Pearson teaching staff, several conclusions regarding each of the issues are presented; in many cases, specific examples or instances are given as illustrations. These examples always appear within a double numeration system in the documentation (e.g., 1.3 or 2.5).

Some of the issues addressed in the documentation include: how to assist non-handicapped children in learning to accept their handicapped peers; helping special needs children accept their disabilities; techniques for talking with children about handicaps; modifications of regular classroom teaching techniques with special needs children; adapting materials to meet the learning needs of handicapped children; new skills for working with parents; and, strategies for gaining support for mainstreaming from parents of non-handicapped children.

An additional feature of the material that follows is that it provides further information about open-structure, mainstreamed classrooms. While most of the conclusions presented in the documentation are not dependent on a particular curriculum structure, the school's approach to the use of space, time, materials, and social groupings becomes more evident in the following pages.

DOCUMENTING THE MAINSTREAMED TEACHING PROCESS

I. Interactions between handicappped and non-handicapped children

A. Strategies for assisting non-handicappped children in learning to accept their handicappped peers.

1. The teacher must try to be aware of each non-handicapped child's particular concerns and interests with respect to a peer's handicapping condition. The overall strategy is to give simple direct and honest explanations that are relevant to the children's developmental level and understanding. The teacher should listen for conversations or incidents around a particular issue, and then step in to discuss it.

1.1 Patty, re: her paralysis

Children sitting around snack table, someone says, "Just because she can't walk, doesn't mean she's a baby."

Teacher: "That's right, Patty's legs do not work. But she is five years old just like you. Patty, would you like to explain why your legs don't work?"

Patty explains in great detail how she was hit by a van ("dumb driver").

1.2 John, re: aggressive hitting

"I don't like John. He's always hitting."

Teacher: "John has a difficult time when he's angry. We need to help him use words. You need to tell John how it makes you feel when he hits you."

1.3 Michael, re: limited mobility

"Michael's legs aren't strong enough for walking. He needs his walker to help him walk."

1.4 Joel, re: aggressive, hyperactive behavior

We talked about Joel's behavior in specific situations. For example, to explain an outburst of angry hitting and removal for a time out, a teacher would say, "Joel is very angry because he couldn't have the car. He needs to be alone to calm down." Or to explain a special choice board system designed to help him focus his attention on classroom activities, a teacher would say, "Joel sometimes has trouble finding something to do at school. These cards help him choose."

1.5 Scott, re: high distractibility

When Scott has a hard time waiting for his turn when playing a game, a teacher says that "Scott has a hard time waiting for his turn" and helps Scott to wait. All of the children get to hear a partial explanation of Scott's disability, but do not suffer for it since the teacher keeps the game moving along.

2. To the extent that it is possible, special needs children should be treated similarly to all other children with respect to classroom jobs and expectations.

3. When the special needs child requires special assistance, other children can be asked to help, rather than always relying on the teacher.

4. One way of helping non-handicapped children learn to accept special needs children is to create an open attitude in the classroom that encourages children to talk about what they feel and see and that emphasizes the specialness of each child in the class. The presence of special needs and non-handicapped children in the same classroom guarantees that they will look at, touch, talk to, and play with each other. However, these interactions frequently must be structured by the teacher.

4.1 In the beginning of the year, when children were first getting to know each other and the new classroom we did a curriculum unit on "ourselves." The goal of the unit was to make each child more aware of both his own physical attributes and subjective feelings as well as those qualities in others and their relationships within the larger group. Thus, we not only measured a child's height but looked at what the height similarities and differences were among the group. Similarly, we did this with eye color; family constellations; living locations; favorite things to do; things that make us sad, happy, etc. One objective was that by focussing on many combinations that were same and different, we could become open to and interested in handicaps as another one of those variables.

5. It is important to convey the message that having a special problem or needing extra help is a common experience for everyone. Specific references to the "special needs" of non-handicapped children should be as purposeful and straightforward as references to special needs children.

5.1 To explain one "normal" child's refusal to talk at school, teachers stated, "John can talk, but he doesn't feel like talking at school." Or, to explain a teacher's intervention to calm an excitable child, "Bruno sometimes gets so excited that he needs to stay in a chair for a while."

5.2 Later in the school year, when the children were becoming much more self-conscious about similarities and differences, it seemed appropriate to help the non-handicapped children begin to think about the special areas which were particularly difficult or challenging for them. We talked about those things that they needed help with and that they knew others could do better or more easily than they.

It seemed important to directly help them make the connection between what they had isolated as their own "special needs" and the analogous difficulties and feelings of having a handicap. For example, "in the same way that it is hard for you, Jamie, to learn to swim and your swimming instructor is there to help you, it is difficult for Stacey to learn to write, and Janice (her tutor) is trying to help her."

5.3 To encourage understanding of the impulsive behavior of a hyperactive child, one teacher pointed out, "Sometimes when you're angry, you feel like knocking down someone else's building, too. You can stop yourself, but Joel is still learning to stop himself."

6. Reading books with children about handicaps, differences and feelings was valuable. It was also important for parents to read these books to their children at home.

7. Teachers should be aware of children's fears of "contagion" and their concern about whether "this will ever happen to me."

7.1 For a child who expressed fear about playing with a special needs child we explained that Stacey was born with a learning problem, but that another child without this problem could not develop learning problems from playing with Stacey.

8. Identify strengths of special needs children and reinforce them in the group. Build curriculum around the strengths, and when possible, pair handicapped and non-handicapped children together in projects or activities.

9. Although teachers can develop ways of explaining one child's handicap to another child, the handicapped child must also learn to explain his/her handicap to others. It is effective to help handicapped children learn simple responses to other children's questions about their handicaps, and then to be available to facilitate a dialogue between a non-handicapped and a handicapped child.

10. Treat the special activities of the special needs children as part of the classroom routine.

10.1 The entire group comes together at the beginning of the school day for a meeting. All children get their first assignments which include tutoring for some children, small group work with adults and independent play. It becomes accepted by all that sometimes special needs children get tutors but that all children get something to do. Therefore, the special needs children are not singled out for their differences.

B. Helping special needs children accept their disabilities.

1. Frequently, teachers will have to clarify for the handicapped child that the other children simply do not understand why they need braces, can't speak clearly, etc. The teacher should help special needs children begin to feel comfortable talking about themselves and even calling attention to themselves on occasion.

1.1 Patty, while in braces, left her crutches at the other end of the room and asked a child to bring them to her. In so doing, the child began to use them. Patty yelled angrily, "Don't you use my crutches." When told by the teacher that the child was only seeing how they worked, Patty said that that child was making fun of her.

The teacher explained that the child was not making fun, but trying to figure out how they worked. The teacher went on to explain that Patty was the only person who knew how they worked. She knew something others did not know and perhaps she could show others how to use them. Patty thought it over and decided she would. She then took over, saying, "All who want to learn how to walk with crutches come on over." She then proceeded to show them how they worked.

2. Reading books with special needs children about specific handicaps is very useful. Making books about hospitals and hospital experiences and sharing these with the class can also help the special needs child gain perspective on a disability.

3. Talk with children honestly about the fact that some things are more difficult for them than for other children.

3.1 For Chris, the struggle in relation to his disability was to help him accept that there were weaknesses in his motoric and memory abilities which required special help. Although he was willing to attempt any activity that did not directly challenge those abilities, he quickly figured out which games and activities were "tutorial" and and resisted strongly.

It might have been possible to disguise things enough so that Chris never knew that painting with small brushes was aimed at improving his motor control - but was instead just a lot of fun - but it seemed too important for both the speed of his learning and for the development of a realistic and accepting self-concept that Chris be able to accept that his disabilities meant some things would be difficult and not so much fun.

4. The teacher must help the special needs child to value his own worth and to respect and utilize his strengths and abilities.

4.1 With one child, we always tried to mirror for him the strong and capable side of himself. The result was, he learned to talk more openly about his disability-particularly in relation to having trouble using his right hand; he was able to say things were hard for him but continue to persist anyway; he patiently acquired enough confidence in his skills to try a wide variety of activities; and he could accept more willingly the sometimes less sophisticated quality of his work.

4.2 One special needs child, Chris, was involved in a project with a teacher and a group of other children. They were making dog houses and the final step was to write the name of their dog on the house. Chris waited patiently through the invention by others of imaginative and funny names which the teacher helped them to write. When it came his turn, wary of being embarrassed in front of his peers by what he must have accepted as poor writing and auditory-visual memory skills, he confidently chose his own name for his dog-CHRIS-and wrote it without hesitation on his paper. This ingenious solution - although evidencing a continued resistance to asking for help - showed his acknowledgement of a disability in relation to his peers and a resourceful way of coping with it. It also opened a route for continuing to reinforce for Chris the importance of working at skill development.

5. Special needs children can learn how to stand up for themselves in an argument by modeling the teacher's advocacy and support.

5.1 With Stacey it was clear that she had internalized some of the ways in which she was different and disabled. It was important for this understanding not to deflate her self-respect. By acting as advocates for her, and then giving her the words to advocate for herself, it became not unusual for Stacey, when teased, to respond with "no me not!" or "yes me can!" without soliciting teacher intervention. It was also clear that Stacey retained alot of pride in her achievements and appearance and developed the confidence to overcome verbal obstacles in order to share that pride. For several months we had a sign up sheet to make announcements each day. Stacey continually scrawled her name in an appropriate space to have the opportunity to announce something (no matter how irrelevant).

To the entire group, her persistance and patience were reinforced and encouraged.

6. Careful work with parents was essential so that the goals, strategies and attitudes being fostered in the classroom would continue to be reinforced at home.

7. Teachers should try to help special needs children understand and become self-conscious of their behavior so that they can ask for help when appropriate.

7.1 Danny asked a teacher to take him to the time-out space because the class was becoming too difficult for him to deal with.

7.2 Scott asked a teacher for a timer to help him stay at an activity.

7.3 One day Ronnie told his teacher, "I a good boy today. I no hurt anybody."

7.4 Bobby reported: "Someday I won't need a tutor if I can learn better."

8. In working with a child to help him/her accept and overcome a problem or disability, it is critical that the child and teacher not lose sight of the child's strengths and areas of competence.

8.1 The major challenge with Joel was to support his self-worth as well as to teach him more socially-acceptable behaviors. The chief classroom goal was to help him develop positive interactions with teachers and peers and to increase his ability to express strong feelings in non-aggressive ways. The instructional approach was to clearly delineate acceptable and unacceptable behaviors. Acceptable behaviors were rewarded with affection and with encouragement for Joel himself to feel good. Unacceptable behaviors were stopped right away in order to minimize their occurrence. Methods for rewarding acceptable behaviors included constant recognition of good behavior: "You know how to share"; "You and Adam are being friends"; "You stopped yourself from hitting. Now you can use words to talk about the problem". Methods for stopping unacceptable behavior included firm reprimands and time out in a partially enclosed classroom space.

Joel did develop a more accepting attitude toward himself and a friendlier, less defensive attitude toward other children. By the end of the year he was testing out a range of statements about himself with teachers in order to see their reaction, such as, "I'm dumb" or "I'm smart now", "I can be the boss here", "I don't have friends" or "Adam is my friend." He continued to rely heavily on teachers' unwavering acceptance of him in order to feel good about himself.

C. Techniques for talking with children about handicaps

1. Occasionally, a simple explanation of how a child became disabled will be productive. Such explanations, however, should occur as natural extensions of children's expressed interests.

1.1 Adam arrived at school with a plastic body of man. He wanted to give a "lecture" on the human body, and did so. While discussing the legs he said, "Now, the legs are what make you walk, like this," putting one foot in front of the other,"unless of course you're like Patty and break your legs. Then you can't walk unless they put you in a cast. Then she could walk."

Teacher: "Patty's legs are not broken. Even if they were put in casts, she could not walk. Patty's legs cannot be fixed. They will never work. The only way Patty can walk is with her braces and crutches, but her legs will never work." When pushed for further explanations, the teacher showed the spinal cord on the model. She explained that the brain sends messages through the spinal chord to tell the legs what to do. Patty's spinal chord was broken when she was hit by the truck, so the brain can send no message to her legs.

2. Handicapping conditions should be talked about with special needs and non-special needs children in observable, behavioral terms.

2.2 Bobby, who is hearing impaired, had difficulty sitting or attending during group time. After observing this, the teacher began to wonder if his inattentiveness was related to hearing loss. She gave Bobby a special place near her and told him he needed to sit there because he would then be able to hear what was going on better.

2.3 To a child with mild cerebral palsy: "Sometimes, it's difficult to use your right hand, isn't it? It's hard to make it work just the way you want it to. Here, I'm going to help you hold this scissor so we can help your hand practice to cut better."

2.4 To a child with developmental delay: "It's hard for you to write these letters. You have to practice over and over. But look how beautiful that "s" looks - you really worked hard on getting that so good."

When Stacey says "me"go, we respond by asking "Who goes?" She says, "I go."

2.5 For a child with impulse-control problems: "I know it's sometimes hard for you to say, "I'm angry" and the first thing you want to do is hit. How do you think it makes ________ feel to get hit? Let's try to see if she understands better when you tell her just how mad it makes you feel."

3. Most problems of special needs children that need to be discussed with other children can be talked about in the identical way that non-handicapped children's problems are discussed.

3.1 Scott uses the word "me" incorrectly (e.g., "me do it") so the teacher says "Who did it?" and Scott usually responds with a smile "I did it." There is no discussion of why he makes this mistake. In other cases where Scott does not understand what's going on, the teachers tell other children that sometimes it is hard for Scott to understand.

3.2 When Ron starts to take a toy from another child, the teacher says, "I know it's hard for you, but you must use words." The teacher says the same thing to other children.

3.3 When Bobby cannot make himself understood, his teacher says, "I know it's hard for you, but say it again a little slower." The teacher tells other children that it is sometimes hard for Bobby to talk.

4. With physical disabilities it is important that explanations and verbalizations are initiated at a very personal level. That is, the significance of the disability from the child's point of view should be considered first. Then, issues relating to therapy, prosthetics, aids, etc. can be introduced.

4.1 Michael's handicap, cerebral palsy, was physical and visible. At the beginning of the year, discussions with Michael about his handicap dealt more with the limitations of having cerebral palsy than with the specific details of the handicap. We helped Michael to tell other children why he needs a walker ("My legs aren't strong enough for walking. I need my walker to help me walk."); to insist that his walker was for his uses only; to set limits with other children when playing rough games; to ask for extra help when he needed it; and to express feelings of anger and frustration when he fell over unexpectedly or was left behind. Gradually we began to talk more specifically with Michael about the treatment procedures he received weekly - physical therapy sessions, the transition from a hip brace and full leg supports to a heel to knee support to leg braces and crutches and discarding the walker. Michael responded positively to these objective discussions of his disability; and other children shared constructively in these discussions also.

5. With some handicapping conditions, it is important to create opportunities in the classroom for socio-dramatic play, so that both special needs and non-special needs children can "try out" an inherently frightening situation in a safe and controlled environment.

5.1 Kevin's handicap, major surgery to remove a brain tumor, was physical and invisible. Kevin had no surgery during the school year, but was in and out of the hospital for blood transfusions and because of illness. We did not talk with Kevin directly about the nature of his illness, but we did provide many opportunities to talk about doctors, hospitals, being sick, being small, being weak, and feelings of loneliness, anger, and fear. Discussions occurred regularly thoughout the year, initiated by Kevin or teachers, or stimulated by school events, such as Kevin's recurring hospitalizations and separation problems, the hospitalization of another child in the class for surgery and the presence of a child in the class whose father had died. Many opportunities were provided to play out doctor-patient-hospital themes using doctor props and a "hospital" set up. Kevin responded to discussion and stories and play props, but he was never preoccupied with these things and seemed more interested in the normal activities at school. Other children joined in the discussions mentioned above.

6. With acting-out and aggressive children, it is important to clearly distinguish between the child's feelings and the child's inappropriate expression of those feelings.

6.1 It was difficult to talk about Joel's disabilities, which included problems in all areas of development, with Joel or with other children. Our approach was to make instructional and therapeutic statements about Joel's specific behaviors or our perceptions of his feelings rather than about the nature of his disability as a whole. The biggest problem area for Joel at school was his lack of control over angry feelings and impulsive aggression. In talking with Joel, we acknowledged and accepted his feelings, but not his out-or-control ways of expressing those feelings. We assured him that teachers are in control in the classroom, that they can help him express and learn to control difficult feelings, and that they will keep him safe. Representative statements include:

"You feel angry because Adam took your car. It's all right to be angry, but you cannot hit. You have to use words to talk to Adam. Teachers will help you", or if a teacher intervenes soon enough,

"You can stop yourself from hitting. Use words. Say, I'm mad. I had that car!"

In addition to setting clear limits on Joel's behavior, teachers assured him repeatedly that he can learn to behave appropriately.

7. Non-handicapped children most frequently notice those disabling conditions of special needs children that are particularly visible and dominant in the classroom. Whenever possible and productive, non-handicapped peers should be involved with the behavior management programs being implemented in the classrooms to help these children.

7.1 We talked with non-handicapped children about Michael's handicap in the same way that we talked with Michael. The only differences were to assure other children that the condition had existed from birth, that it was neither contagious nor painful, but that Michael's equipment was not a toy and was no privilege to have to use all the time. We were able to obtain an extra walker so that other children could satisfy their curiosity and allay their own fears by trying it.

7.2 Other children in the class overhear and learn from the teachers' interventions and discussions with Joel. They know when Joel is having a hard time and that teachers are taking care of him and keeping everyone safe. They need to hear realistic statements about Joel's difficulty controlling himself, expressing his feelings in acceptable ways, and learning new things so that they do not feel overwhelmed by his acting-out behavior. They need to learn some tactics for responding to Joel's behavior - telling him to stop with support from a teacher and expressing their distress when he takes advantage of them. Only when other children feel powerful enough to stop him and to tell him how they feel can they stop being afraid or defensive and develop understanding and compassion. This is also an ideal learning situation for Joel.

D. Strategies for dealing with incidents of scapegoating.

1. The teacher can often reduce scapegoating of a special needs child by providing special help to that child. Helping a child appear well-organized, interesting, and appealing to others often attracts positive attention from other children.

2. The child who scapegoats often needs as much help from the teacher as the child who is scapegoated. Although the teacher must first limit all unsafe physical or psychological (i.e., usually verbal) abuse it is important to find out what motivated the child to scapegoat.

3. The classroom must be kept accessible to all children.

3.1 Sometimes when an activity is a part of the classroom it feels comfortable to say that the opportunities belong to everyone equally and if they can't share it they have to leave.

3.2 If children reject Joel without immediate cause, saying, "We don't want Joel to play here," a teacher can support Joel's ability to participate constructively, saying, "Joel can listen to what you say. Tell him how to play with you."

4. A mild form of scapegoating sometimes occurs in the process of children finding out about a special needs child's strengths and weaknesses.

4.1 Occasionally, children would make inaccurate assessments of Michael's capabilities, stating that "Michael can't lift things"; "Michael is always the last"; "Michael can't climb the ladder." Sometimes these statements were made as friendly observations, and sometimes they were intended as provocations. The problem was always settled by turning to Michael as the final authority and supporting Michael in answering honestly.

5. Sometimes, the special needs child must change his/her behavior in order to prevent further rejection by other children.

5.1 If children reject Joel because he is behaving aggressively, it is Joel who must change his behavior, not the other children. The following responses might be used, depending upon the explosiveness of the situation:

1) Removing Joel and insisting: "Joel, when you hit, they don't want you to play."
2) Stopping Joel from hitting and instructing the other child, "If you tell Joel to stop, he can listen."
3) Intervening and monitoring the confrontation between the two children, saying, "Joel, we have a problem. David is very sad because you broke his building. What can we do about this?" and supporting a resolution of the conflict for both children.

6. In cases where children encourage a special needs child's negative behavior, or respond with glee when he is disciplined, they must be told firmly and resolutely to stop. Respect for individuals is the prime classroom value.

E. Examples of special needs children serving as positive role models.

1. Most illustrations of instances where special needs children serve as positive role models for other children are common classroom situations in which children responding well to each other or to school routines are praised and used as models of appropriate behavior for other children. There is no difference in quality or content of many of these examples of positive behavior modelling that involve special needs children than parallel examples involving non-special needs children.

1.1 For example, if Joel attempts to comfort a child who feels sad, the teacher might point out, "Joel is trying to help you because he knows you're feeling sad. He brought you a flower." Or if Michael is sitting quietly at meeting, the teacher might stress, "Michael knows how to listen to a story. Bruno, can you sit quietly like Michael?" Or if Kevin is sharing a classroom material in a cooperative manner, the teacher might comment, "Kevin is passing out playdough so that everyone can have some."

1.2 Chris could ride a two wheeler well - something that was valued by other children. He gained a leadership role in trying to show others how it was done.

1.3 Stacey was attentive and cooperative and eager to volunteer to help. She was often a model of the kind of participation that helped us get things done better.

1.4 David was sophisticated in music and in the use of musical equipment. He was often put in charge of helping others use the equipment and he handled this responsibility well.

1.5 Often special needs children would cook things in their tutoring sessions to share with the rest of the class or they would be allowed to invite other children to join them in their sessions. This made them highly sought after.

1.6 Sherrie was a powerful, physically active child who acted as a positive model for Eddy who was cautious in his gross motor development and social overtures. She also stimulated the group to be more experimental motorically. She was two years older than twelve of the children in the group and demonstrated a real nurturing behavior which others appreciated if not directly emulated.

2. Special needs children will sometimes display unusual leadership abilities with other special needs children.

2.1 Michael helped Kevin to feel comfortable in our class by responding in an accepting, good-natured manner to Kevin's overtures of friendship. (Kevin was originally attracted to Michael because Michael had a walker like the one Kevin had used following surgery.) Michael cheerfully included Kevin in his tutoring experiences and often encouraged Kevin to come into the classroom at the start of the day or to join him in play instead of "sitting around." Michael's friendly attitude toward Kevin was also evident in his relationships to other children in the class. By the end of the year, children commented out loud, "Everybody likes Michael," or "Michael is everyone's friend."

II. Adapting instructional strategies

A. Modifications of regular classroom teaching techniques for children with special needs.

1. The instructional objectives used with most mildly and moderately handicapped children are similar to those used with non-handicapped children. Modifications have to be made in the methods or activities by which these objectives are achieved.

1.1 More repetition;

1.2 Greater teacher intervention, including explicit and detailed instructions, follow-through, clearly defined limits, fewer choices or alternatives;

1.3 Classroom spaces that are clearly defined and separate;

1.4 More positive ego reinforcement and encouragement;

1.5 Participation by specialists.

2. In many cases, the effect of a successful modification of teaching style may lead to the special needs child being treated no differently from other children.

2.1 An example of the way in which a strategy for achieving the common social-emotional goal of learning to resolve conflicts with peers may be different for special needs children follows. A disturbed child with poor impulse control needs to learn to use words to resolve conflicts with peers - just as any other child; however the physical and verbal interventions used by teachers with most children may not be sufficient to teach appropriate conflict resolution skills to a disturbed child. The disturbed child may need the task broken down into less complicated steps in order to acquire the skill, as in the sequence below:

a. Disengage child. Focus on disturbed child first. "No hitting." Remove from scene. Return to help other child.

b. Disengage child. Focus on disturbed child first. "No hitting. Use words. Say, 'I want the car.'" Allow play to continue when other children are calm again.

c. Disengage child. Focus on both children. "It looks like you're having a problem here. We can use words to talk about it." Verbally identify the feelings (sad, angry, etc.) of each child. Allow hurt child to express how she/he feels to aggressor while aggressor listens. Help children make an agreement to resolve the conflict.

d. Add to the above sequence: "Let's see if we can think of a way to make John feel better."

B. Examples of using special needs children's strengths in the service of their areas of weakness.

1. Meredith has difficulty conversing with others. She tends to get carried away with inappropriate subject matter, irrelevant statements, rambling and repetition. The teacher asked the tutor to help Meredith write a puppet show to give to the class. This allowed for Meredith not only to think about what she was going to say, but it allowed for her to have the floor while others listened to her.

2. One method used to help Bobby attend at meeting was to give him the responsibility for keeping the meeting quiet, ie., asking others to be quiet. Not only did it work, but the teacher realized that Bobby (who is hearing-impaired) had been so distressed by peripheral noise, that when it happened in the past he joined in to make the noise louder (or drown it out for him). Now, in charge of keeping it quiet, he stops every minor noise rapidly.

3. John had a difficult time sharing materials and equipment. If he brought in a game or toy from home, he often had trouble sharing it. When his mother told the teacher one day that he really needed a mid-morning snack, it occured to the teacher that perhaps one way of John's learning to share would be to make somethings at home to bring in to share for snack, i.e., cookines, carrot sticks, etc. He enjoyed sharing these items, and the class was appreciative and thanked him spontaneously.

4. Chris had a problem with short term visual and auditory memory and often resisted instruction that challenged those abilities. Knowing however that Chris loved athletics, we made up games using balls, races and bicycles that also required memory work e.g., "when you catch the ball, say the letter B"; "race your bike and land on the letter M". Since we knew Chris loved cooking and measuring, many cooking projects were introduced with their emphasis on memory. He also had strong leadership skills and so by making him a leader of activities we found he invested more strongly in mastering them.

5. David was slow in the development of expressive language abilities. He was a good artist, so we used his pictures as motivation for stories. He was also interested in creative movement, so we encouraged him to describe as well as act out the qualities of particular things. As he loved being the center of attention, games oriented around his leadership abilities were set up to encourage his verbal participation.

6. Stacey had a problem with immature language and speech. She loved to play house and was creative in her interactions there. We used house-play as a way to provide her with language and role modeling that would improve her own skills while gaining her more acceptance from her peers.

She also loved to sing. We discovered that singing was an excellent way to reinforce language patterns. For example, learning the song, "Oh yes I know the Muffin Man" helped reinforce for her the use of correct pronouns.

7. Danny had a difficult time sharing materials with other children. He was also fascinated with space ships and astronomy. We had Danny build a rocketship during his tutoring time which was then brought to the classroom for all the children to share. This project was successful on all accounts.

8. One of Scott's skills was that he knew his colors. However, he always had a difficult time waiting for his turn. Consequently, we developed several games which were based on identifying colors where Scott had a chance to be successful while an adult helped him take his turn.

9. One of Bobby's strengths was his general physical ability; one of his weaknesses was expressive language. We developed large block construction games in which he was the foreman who has to give verbal direction to other children. This role was acceptable to the other children because of his superior physical ability and strength. They, in turn, would give Bobby instant feedback by understanding or not understanding his directions. An adult would help interpret if necessary.

10. Aimee showed a real interest in cooking. We were frequently able to include Aimee in a cooking (or mixing and stirring) group which brought her into positive contact with her peers. It was usually difficult for Aimee to be physically near her agemates - let alone share equipment, materials, teachers, or verbal exchanges.

11. Sherrie was interested in mastering real life self-help skills but showed an inability to attend to a task for mo e than a few moments. By assigning her these practical-life tasks she learned to persevere for up to ten minutes.

C. Examples of the use of regular classroom materials for informal assessment

Area of assessment	Material	Strategy
Fine Motor skills	cooking	- how pours - spread peanut butter - mix batter
	clay	- how uses
	painting	
	beads	- string beads
hand preference	crayons	
	scissors	
	using tape	
	getting dressed	- zippers - buttons
perceptual-motor	magic markers	
	copy forms	- copy and trace forms
	cubes	- build
	color cubes	
motor planning	music	- clap rhythms and repeat
	game	
Gross Motor Skills	music	- songs
identifying body parts		
movement	music	
	stairs	- how uses feet going up and down
self in space	big blocks	- how climbs over and on
body control		- follow instructions
	ball	
Cognitive		
seriation	legos	
classification	legos and A blocks	
numbers		
copying		
identify shapes	A Blocks	
sequencing	macaroni beads	
naming colors	magic markers	- name color before gets to use it
initial consonant sounds	clay	
rhythm and beat	music	- clap to music and get beat
ability to follow verbal instruction	A-Blocks	

D. Examples of materials that were adapted to meet the learning needs of special needs children

1. Most of the materials in a mainstreamed classroom are identical to those materials used in classrooms without special needs children. In some cases the actual materials are adapted to accommodate to special learning needs. Frequently, it is not the materials which are modified: rather, the method of presenting and organizing the materials for the child's use is changed. Moreover, in working with children who are at significantly different developmental levels, the same materials may be used, but used to solve different problems.

Examples of the adaptation of a number of standard classroom materials follow:

Material	How Adapted	For What Purpose
1.1 Piano	color coded rather than number coded	Special Needs child could play songs even though relating at lower cognitive level (i.e., color, not number)
1.2 Drums	proper drumming technique was required rather than just banging	Good skill building and use of muscles that needed exercise
1.3 Lotto	simplify the task - class had to match whole name and state beginning sound - special needs child had to identify name of beginning letter	Child could play game with peers and also be at an appropriate learning stage
1.4 Lego	- show storage - allow only a few to be taken - define working space - define job to be done	To help focus attention and avoid negative behavior (dumping and fighting).
1.5 Color Cubes	- more elementary, or primary, goals established	To accomodate immature fine motor skills and below age level cognitive ability
1.6 Picture to accompany name tag	- needs more clues than just letters of name	Recognition and scanning skills
1.7 Blocks	- area marked off in block area with masking tape to delineate a private space	Child had a hard time parallel playing, so gave him a space within larger area
1.8 Blocks	set up as a "launching pad" for rocket jumps	To give incentive to learn to jump and to practice jumping
1.9 Sand	sand paper letters	To learn alphabet for motorically oriented child
1.10 Sponges and cloths	cut smaller	Make it easier for clean up

2. Although the same classroom materials can be used to teach non-handicapped and handicapped children the same skills, there are special classroom materials and environmental adaptations that are particularly desirable in an integrated classroom. Special materials that are helpful for children with motor problems, but are also readily appealing to normal children include: loop handle scissors that can be operated with the whole hand rather than two fingers, plastic cups with handles rather than handle-less paper cups, squeeze glue bottles rather than glue brushes, three wheeler "tricycles" that can be operated by hand, and sets of common materials such as Attribute Blocks and leggos in large, heavier sizes. It is also helpful in an integrated classroom to have materials available that provide practice in very basic skills - buttoning, zippering, lacing, etc.

Special environmental adaptations include: ramps and railings alongside steps, railings in bathrooms, ladders positioned to slope gradually, places to sit to dress and undress, and convenient places to sit at activities where children commonly stand to play, such as the water table, sand table, and carpentry bench.

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E. Adaptations in classroom structure and organization

1. The principles that guide the organization of the integrated classroom program are not very different from those of a non-mainstreamed program. Some of these principles are:

1.1 To provide activities each day that represent a range of complexity and challenge;

1.2 To balance a complex teacher-directed project on the art table with a less challenging child-directed project set up on the "project table";

1.3 To offer small group work that involves a small group of children learning about a subject area of their choice over a short period of time;

1.4 To set aside 1 - to - 1 time with children who need help in specific areas and to provide that experience each day (such as motor exercises with a teacher or language work with a teacher);

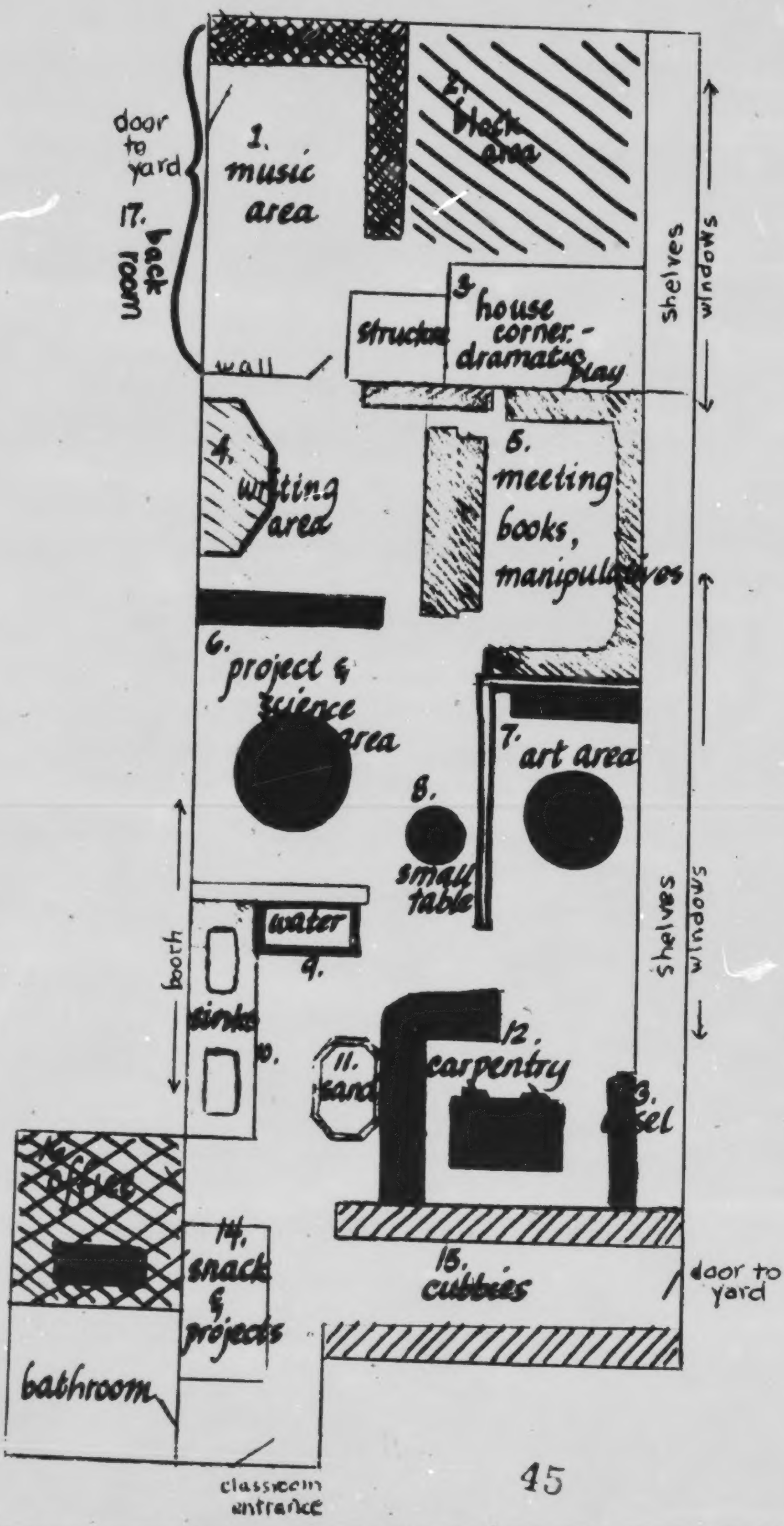
1.5 To provide materials at graduated levels of complexity that can be adapted for use with each child at his/her developmental level, such as legos of different sizes, picture lotto and word lotto, color cubes and color cube design cards.

2. One of the most important adaptations of a mainstreamed classroom that is specific to a mainstreamed classroom is the need for a larger number of staff. Mainstreamed classrooms need more people to care for and teach more demanding children.

3. For the one hyperactive, distractable child in our class, we developed a "choice board" system. Joel's attention was focused on activity choices by means of a hanging board on which cards could be placed to represent his chosen activity. The cards represented all possible choices in the room by means of picture and word. Joel's first activity each day was to go to his choice board to choose one of two activity choices presented by a teacher. Or, if Joel arrived with an activity choice in mind, he was encouraged to state that choice and to search for the appropriate card to hang on the board. Thereafter, whenever Joel completed an activity, he was brought back to the choice board to make another choice.

By the end of the year, he was often able to monitor his use of the choice board independently. The two significant effects of this system were Joel's increased attention to and awareness of school choices and activities, and the decrease in inappropriate, attention-getting behaviors at transition times.

F. Diagram of one Eliot-Pearson Classroom



G. Representative classroom materials and examples of their instructional use.

Classroom area	Material	Instructional Use
Music area	piano	auditory discrimination, visual motor discrimination
	percussion instruments	motor coordination, auditory discrimination: rhythm, volume, pitch
	record player	language abilities, music sensitivity, creativity
	tape recorder	language; personal-social
	music paper and music books	fine motor, writing, reinforcement for using the instruments in creative ways
	scarves and props for creative movement	
	percussion stand	auditory discrimination, personal-social, fine motor control
Block area	large hollow blocks	gross motor coordination, motor planning skills, personal-social
	small blocks	motor coordination, motor planning skills, personal-social, language
	assorted cars, trucks, trains	motor coordination, language, role modelling, social interaction
	paper and crayons	extending activities through representational drawing signs, reading skills, stories, language
House corner	dress up clothes	personal-social - role modelling, creative expression, language and speech

Classroom area	Material	Instructional Use
House corner	child size furniture	personal/social-role modelling creative expression, language and speech
	pots and pans, empty food cans	
	thematic props	
	puppets	
Project and science area	measuring cups and cooking apparatus	motor development; conceptual development of relative size, volume, proportion
	playdough and clay	fine motor coordination; creativity; relative shape, size, color
	scales	fine motor coordination, concepts of light and heavy; concepts of relative weight
	magnets	language, fine motor skills, scientific properties, problem-solving
	magnifying glasses	concepts of relative size, properties of magnification
	batteries and bulbs	language, fine motor, problem-solving, scientific principles
	materials for planting	fine motor, personal/social, mathematics
	books	personal/social, language
Writing area	various alphabets	motor coordination, language skills, visual memory, writing skills, pre-reading skills
	work sheets	can be used to direct learning in motoric, conceptual, linguistic and cognitive areas

Classroom area	Material	Instructional Use
Writing area	mailboxes	drawing and writing skills, personal-social communication, language
	chalk board and chalk	motor coordination, drawing and writing skills
	pencils, markers, crayons, assorted paper	
	printing letters	motor coordination, perceptual-motor skills:sequencing, seriation, classification, spelling, reading
	numerous books	
Manipulatives and games	puzzles	perceptual-motor coordination, color, memory
	legos	fine motor coordination, color personal/social, problem-solving
	attribute blocks	visual discrimination, sorting, classification, language
	cuisenaire rods	fine motor coordination, color discrimination, size discrimination, proportional concepts, addition and subtraction concepts
	pattern blocks	color and shape discrimination, perceptual-motor coordination, visual and auditory memory
	dominoes	motor coordination, counting, visual memory, strategy
	dice	fine motor control, visual discrimination, counting, math: addition and subtraction
	clock	numbers, seriation, telling time

Classroom area	Material	Instructional Use
Manipulatives and games	playing cards	fine motor control, visual discrimination, visual memory, math: pre-reading, strategy
	geoboards	fine motor coordination, shape discrimination, motor planning, perceptual-motor coordination
	wooden cylinders	fine motor coordination, seriation, classification, relative height and width
	sewing cards	fine motor coordination
	checkers	fine motor coordination, color, direction following, personal/social, counting - math, strategy development and implementation
	board games	personal/social skills, strategies, counting, will reinforce concepts inherent in the game: i.e. Candyland - colors; Chutes and Ladders - numbers forward and backward
	number-rite	fine motor coordination, sequencing and seriation skills, concept of number, recognition of numerals
	lotto	personal/social skills used to reinforce concepts inherent in the particular lotto game, matching skills
	rhyme puzzles	fine motor, visual discrimination, word-object relationships, phonetics
	wooden alphabet	fine motor, matching skills, seriation skills, letter labelling, letter sounds, pre-reading, word building
	parquetry blocks	color; shape, matching, creating patterns

Classroom area	Material	Instructional Use
Manipulatives and games	peg boards	fine motor skills, color, pattern formation
	twister	color, gross motor coordination, personal-social
	puppets	motor coordination, personal/ social skills, language and speech
	picture cards	personal/social, language
Art area	coloring equipment	fine motor skills, creative expression, personal-social skills
	adhering materials	concepts of color, shape, design, line, size, texture
	paper	
	scrounge materials	
	paint	
Water table	funnels and tubes	fine motor coordination, properties of water
	straws	properties of air in water
	measuring cups and spoons	fine motor coordination, properties of relative size and amounts, concept of conservation
	pouring recepticals	(same as above), increased experiences with water; teach the child how his reactions and actions can affect his environment and which things in the environment remain constant
	egg beaters	
	water wheels	
	food coloring	color: increase novelty and exploration with water
	soap/detergent	
	assorted objects	

Classroom area	Material	Instructional Use
Sand table	measuring cups and containers	personal/social, role playing, fine motor, properties of sand, laws of conservation, laws of gravity
	strainers and sifters	
	shovels and spoons	
	home made chutes	
	dramatic play props	
Carpentry	hammers	fine motor control, personal/social, motor planning, problem-solving
	saws	
	assorted nails	
	drill and assorted bits	
	screw driver	
	assorted wood	
	take apart objects	
Easel	paint and brushes	fine motor control, eye-hand coordination, personal/social color - color mixing, texture, motor planning, creativity
	rollers	
	assorted paper	
	hanging rack	(same as above), independence

III. Working with parents

A. Working with parents: new demands and new skills acquired as a result of mainstreaming.

1. In working with the families of special needs children, a number of the demands made on teachers directly concerned issues pertaining to a child's handicapping condition. For example:

1.1 Discussing with parents a child's already diagnosed handicap and working out a plan to respond to the child's needs in a way acceptable to both parents and teachers.

1.2 Taking part in the diagnostic process for a child who is not developing or behaving normally, but whose special needs have not yet been clearly identified.

1.3 Attending meetings with and coordinating therapeutic programs with outside professionals who are involved with the family and child, such as occupational, physical, and speech therapists.

1.4 Recommending occasional additional testing or referring child and family to services outside the school.

1.5 Understanding and taking into account, a child's medications and medical history.

1.6 Discussing extreme behavior problems or significant developmental delays with parents in realistic and helpful ways.

2. Teachers had to become familiar with the state laws regarding special needs children. In conjunction with school administrators and other staff members, they must be able to advise and support parents, advocate for children in core evaluation meetings, and complete relatively technical paperwork.

3. Teachers have to increase their familiarity with the professional services available to children with special needs. They also should be aware of parent support organizations and other community resources.

4. A number of new skills were developed or refined as a result of working with parents of special needs children:

4.1 Increased sensitivity to the issues of hospitalized children and the needs and concerns of their parents.

4.2 Increased sensitivity to the special qualities of parents of special needs children: their vulnerabilities about the problems of their children; their courage and their need for hope and practical assistance; their determination to find the best education and care for their child, their flexibility in trying new ways to teach their child as well as their inconsistencies in the face of a very hard parenting job.

4.3 Increased sensitivity to the demands and hardships, as well as the joys of parenting.

4.4 Increased sensitivity to the fears and concerns of parents of normal children whose children attend mainstreamed classrooms.

4.5 Greater ability to facilitate dialogue directly between special needs and non-special needs parents.

5. The issue of "confidentiality" was clarified. It does not necessarily mean "secret" (i.e., absolutely no information to be shared with other parents). Rather, it was taken to mean sharing information among parents with clarity and openness, while always respecting the feelings and dignity of special needs parents. This policy was made clear to all parents, and consent was acquired.

B. Strategies for gaining support for mainstreaming from parents of children with special needs.

1. In discussions with parents of children with special needs, it is critical that teachers be honest, open, non-judgmental and understanding. It is the task of the teacher to validate the parent's feelings, while trying to provide additional context, knowledge and perspective.

2. Personal relationships between special needs and non-special needs children can be fostered if the teacher suggests to parents that their children might enjoy playing together outside of school. Such contacts can go a great distance toward increasing understanding between parents.

3. Specific strategies include:

3.1 Discuss the behaviors of special needs children, as well as any unusual behaviors of non-special needs children, in a calm, straight forward manner with all parents;

3.2 Be honest about the possible drawbacks of mainstreaming, but equally reassuring about (and convinced of) its benefits;

3.3 Invite parents to observe the class or to work in the classroom, expecially if they have questions about particular special needs children, and make oneself available to talk about the experience afterward;

3.4 Encourage car-pools that are mainstreamed;

3.5 Create forums for discussion that include parents of special needs and non-special needs children and that focus not so much on the exceptionalities of special needs children as on the commonalities of all children in a particular developmental stage;

3.6 Establish a library of books for parents and children about handicaps and family experiences with handicapping conditions;

3.7 Provide parents of children with special needs with the phrases and appropriate explanations that are used to talk about children at school.

C. Strategies for assisting all parents in acquiring understanding of the issues of mainstreaming.

1. The main access to parents always seems to be through their children: their goals and expectations for them; their own parenting issues surrounding them; and the ways they perceive school as serving those goals.

Strategically, the processes for communication around these issues, could occur in the following sequence:

1.1 Upon acceptance to the school, all parents are informed that this is a mainstreamed program, that the issues of mainstreaming will be discussed, and that their participation is needed in order to make the program work. Any questions parents had at this time would be answered.

1.2 In September, the teaching staff makes visits to each child's home. There, in a less hurried, more personal encounter, teacher and parent can discuss the school program. Time would be taken at this point to reinforce the school's commitment to mainstreaming and to talk about what parents can expect to see in the classroom. With special needs parents, it is important to communicate that some information is being shared with other parents and to allow them to participate in the formulation of what they might want communicated about their child.

At this point it is important to stress the availability of the teaching staff to receive all concerns, including those relating to mainstreaming.

1.3 In the early part of the year, at the first evening room meeting, open dialogue on mainstreaming as well as other issues should be encouraged. It is sometimes useful to show a film or slide-tape as an impetus to such a discussion. It could also be useful to solicit in advance the contributions of special needs and non-special needs parents in describing and discussing their responses to mainstreaming.

1.4 Throughout the year the teacher must maintain a great deal of flexibility with regard to individual and group issues. Extra parent conferences or room meetings may have to be scheduled to accommodate those needs. Informal communication between parents by recommending that children play together after school; bringing together parents who have similar issues concerning their children or who can serve as resources for each other. Pot luck suppers and informal social meetings for parents are another way to bring all parents closer together.

1.5 Regular parent conferences should always raise the issue of responses to mainstreaming. Too often it is assumed that if parents say nothing, they are feeling satisfied and informed, whereas just the opposite is often true.

1.6 Parent meetings should continue to occur regularly. Although mainstreaming will not always be the issue - the commonality of parental concerns will.

1.7 Some parents will require special attention to help them express their feelings without being destructive to others. Teachers can model how to do this and may have to intervene in group situations. In the ideal situation, parents who become comfortable as a group contract for how specific and how in depth they want their discussions and relationships to become. However, since this type of situation is difficult to anticipate, it becomes the responsibility of the teacher to take an issue one step further and carefully analyze the receptivity of the group.

1.8 This process can not occur unless there exists between the teacher and parents a trusting relationship concerning each child and the program as a whole. Parents must feel safe and welcomed in the classroom - for that is the place in which they will gain the most understanding of these issues as they relate to their children. They must feel that the teachers are not infallible but are dependent on parent input in order to achieve better solutions, and they must be helped to see the interconnection between their own growth and the growth of their children at home and at school.

D. Considerations in structuring teacher-parent conferences with parents of children with special needs and parents of children without special needs.

1. In general, the goals of conferences with parents of special needs children overlap with the goals of conferences with parents of non-disabled children. These goals include:

1.1 Establishing a caring dialogue about the child;

1.2 Finding out about the child's behavior at home;

1.3 Sharing observations about the child's behavior at school;

1.4 Expressing any concerns about the child's behavior at school;

1.5 Discussing ways of responding to any problems or special needs of the child;

1.6 Sharing ways of reinforcing positive growth;

1.7 Expressing caring about the parents' experience at the school.

2. Nevertheless, some differences exist in the content of conferences with parents of special needs children. Some of this content might include.

2.1 Discussion of diagnostic and medical information and procedures;

2.2 Communication about outside professional services for the child.

2.3 Preparation for core evaluations.

3. In all parent conferences it is important to be direct and to state information and concerns as simply as possible. Ample opportunity should be allowed for parents to express feelings and concerns that relate specifically to their child, and the teacher must listen. With parents of special needs children, the teacher may wish to set up the conference so that the child's tutor or another professional can also attend. Frequently, because of the involvement of outside professionals, the teacher may have information about the family that did not originate with the parents. In such a situation, the teacher should either not act on the information at all, or (s)he should tell the parents the source of the knowledge and discuss it with them.

Conferences with parents of special needs children are also usually more "future-oriented" than other conferences. Parents may indicate greater concern about the child's future schooling and therapeutic experiences and will require highly specific information. Finally, these conferences will frequently be more affective in content than most conferences. The conference is sometimes an occasion for parents to confront difficult issues directly for the first time; the teacher's role in these situations is to be accepting, supportive and honest. The teacher should never presume to have more knowledge or skills than he/she actually has. Rather, the teacher can serve an extremely valuable role of liaison between the parent and those specialists who are in a better position to provide therapeutic services and valid information about the child's prognosis.

3. Other Direct Services

In addition to the individualized classroom experience, children with special needs participate in several different forms of instructional experience. In particular, three instructional options existed in 1977-78: a) one-to-one tutorial work, b) small teaching groups, and c) home teaching. Some children were involved in more than one of these arrangements, based on their strengths and needs as well as on the needs of their families.

a. One-to-one Tutorial Program

The tutorial sessions serve a number of purposes. First, they provide each child with a one-to-one experience with an adult that is designed to be warm, accepting, and free from competition with other children. Second, they provide for additional individualization of instruction. In some respects the tutorial sessions are "deficit-oriented" because they focus on the child's handicapping condition and seek to implement a program of remediation. Nevertheless, as in the classroom program, the child's limitations are addressed through his strengths. A third purpose of the tutorials is to extend the activities of the regular classroom program by teaching the child how to use some of the core materials of the classroom. A fourth purpose is to serve as an alternative learning setting free from the distractions and stimulation of the classroom.

Eleven of the eighteen special needs children enrolled throughout the year at Eliot-Pearson received tutorial services. A one-to-one tutorial arrangement usually involved a fifteen to forty-five minute session, meeting from two to five times per week, during class time. The child would be removed from and returned to the class by a student tutor who was responsible for observing, informally assessing and designing an appropriate tutorial program for the child. These students (graduates and undergraduate students in the Department of Child Study) were participants in the Practicum in Special Needs, taught by the special needs resource teachers. The class met once per week. During this time students received direct feedback on their work with individual children and specific support for future work with their child. The student tutors were also supervised directly by the special needs resource teachers several times each semester when working with the children. For children who only attended school three or four days a week and who could benefit from more tutoring, special arrangements were made to taxi them in to school for an hour to an hour and a half on these other days to meet with the student tutor.

The choice of a child for one-to-one tutoring was based on recommendations of the previous special needs resource teacher, observation of children and parental input. For second semester, teachers' recommendations were also part of the decision.

The following charts provide a summary of the work accomplished within this program. Objectives and outcomes are given for each child, as well as follow-up suggestions and general comments.

Eliot-Pearson Children's School
Summary of Tutorial Work, 1978-79

B

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
To increase B 's vocabulary with books labeling household objects, lotto.	B has increased his naming of objects.	B will learn more object names and descriptive words as well. Bobby will learn the function of common objects.	B's attendance in school and for home tutoring has been minimal. He attended two days of school from January to April. Since then we meet with family and attendance has been good. This obviously affected progress.
To teach B primary colors by cutting and pasting, matching.	B does not know the colors consistently.	B will learn the primary colors and be able to label them consistently.	
To improve B 's diet by looking, shopping, talking about food with Mom.	B's 's diet probably remains the same.	B's family needs to learn more about nutrition.	
To improve B's ability to accept limits by dealing with issues as they arose, talking about feelings, etc.	B has improved somewhat in his ability to accept limits.	B will continue to accept limits and begin to express his feelings verbally.	
To increase B's ability to identify feelings and verbalize them by modeling, looking at pictures of people, and discussion.	B does know how to state his needs. He can identify some feelings.	B will improve his ability to identify and verbalize feelings.	
		To promote more independence in self-help skills (use of braces, toileting).	
		To increase his attendance in school.	

B - 2

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
To strengthen B's arm and trunk musculature.	B is very strong. He tries many gross motor tasks.	To continue to strengthen his muscles.	
To increase B's walking with braces and walker.	B goes everyhwere freely and independently.	B will continue to walk using braces and walker.	
To keep his back straight (not to the left).	Progress hard to assess.	To continue to keep his back straight.	

Eliot-Pearson Children's School
Summary of Tutorial Work, 1977-78

C

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
To increase C 's vocabulary with picture cards, books, sentence completion, modeling.	C's vocabulary has grown tremendously. He was essentially nonverbal and now speaks in 5-6 word sentences.	C needs to develop a vocabulary for feelings and learn to express his feelings verbally.	C has a tendency to perseverate on a subject (bridges, stairs) and needs to expand his interests and decrease this perseveration.
To increase C 's spontaneous language through play, conversation, photographs and a scrapbook that recorded home and school events.	He uses correct syntax. He has been taught to read by his father.		
To decrease C 's use of baby talk by introducing nursery rhymes as acceptable place.	C doesn't use baby talk in school.	C needs to continue to use appropriate four-year-old language.	
To increase C 's visual discrimination skills by sorting objects, pictures, lotto, puzzles.	C can discriminate objectives visually. It is a strength of his.	C is a visual learner and will continue to strengthen this mode.	
To improve C 's problem solving skills through waterplay, classifying objects, Pla-Doh.	He can seriate for size and can classify objects.	C needs to develop a sense of number (counting, solving simple problems, etc.).	
To improve C 's gross motor skills by sledding, running, balance beams, nusic, etc.	C tries more gross motor tasks. He can jump, alternate feet on stairs, will tolerate a swing.	C needs to develop a greater sense of balance, hopping skills and learning to ride a tricycle.	

C - 2

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
To improve C's eating habits by presenting one-bite pieces of food at a time.	C has improved, but tends to regress to messing.	C needs to develop use of spoon and fork totally and rely less on fingers.	
To develop C's self-concept with music, body puzzles.	C has improved his self-image.	C needs to further develop his self-concept.	

Eliot-Pearson Children's School
Summary of Tutorial Work, 1977-78

E

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
To accomplish successful separation from mother.	E is happily adjusted to school and separates easily.	To accomplish a successful separation from Justin, E's 's twin brother (placed in separate classes).	
To become spatially oriented in school by walking along, by leading others with tactile clues.	E is oriented to school. He gets around independently.	To continue to be comfortable and expand spatial orientation to include outdoors.	
To improve fine motor skills with large pegs and boards, large puzzles, bristle blocks, unit blocks.	E has improved. He can do peg boards, puzzles, build blocks competently.	E will be introduced to pre-Braille tasks such as tracking raised lines, changing lines, etc.	
To increase attention span for fine motor tasks.	E's attention span has increased to about 10-15 minutes per task.	E continue to improve his fine motor abilities and attention to fine motor tasks.	
To improve eating skills by practice with forks and spoons. Introduction of Mike Mulligan shovel concept and dish.	E has improved his eating skills.	E needs continued help with feeding.	
To introduce E to coloring with wired underframe, so increased tactile experience.	E able to color on sheet.	E will continue to use coloring materials.	

E - 2

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
To introduce concepts of left-right orientation by talking about directionality with him and introducing words.	E is able to respond to directions of left-right most of the time.	Continue left-right orientation. Begin to work on depth.	
		To work on concepts of number.	
To develop his language strength further through stories and by introducing objects.	E has good language skills. His vocabulary has grown.	E needs to improve his understanding of the function of common objects.	
		E needs to learn names of objects found outdoors.	

Eliot-Pearson Children's School
Summary of Tutorial Work, 1977-78

F

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
I. PERSONAL/SOCIAL			
A. With Adults			
1. To establish trusting relationship	Well established relationship.		Requires firm, consistent, gentle limit setting.
2. To establish good working relationship. Activities spending time in and out of classroom. Reading favorite stories; play in house corner.			Needs to feel she has some control in activity choice.
B. With Peers			
1. To establish positive interactive relationships with peers.	Preferred solitary play. Needs adult intervention in peer interaction much of the time.	To be able to play with a peer without adult assistance (accomplished 2nd semester).	Reinforcing positive behavior, ignoring negative behavior.
Activities: Photos of children, creative movement group with tutor assistance.		To reduce negative behavior in peer interactions although much has been eliminated.	Needs time to observe before participating.
C. With Self			
1. To verbalize feelings and needs.	Greater ability to express feelings.	To be less possessive of materials and space (all above accomplished without tutor) second semester.	

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
2. To develop positive self-image. Activities: Use of mirror to explore feelings, puppets. Creative movement group with tutor assistance.		For future - continued work in developing self-image and positive peer interactions.	
3. Self help To be able to dress self except shoes. Activities: zipper board, Dressy-Bessy.	Improvement in self help.	Continued improvement in zipping, snapping, buttoning. To develop greater motivation to dress self.	
II. MOTOR SKILLS			
A. Gross Motor 1. Body awareness 2. Body control Activities: Ball playing, sliding, swinging, climbing, etc.	Very free in gross motor activities - run, jump, climb, swinging, ball playing, rolling.	To relax stiff, toddler-like gait. To encourage more freedom in climbing and sliding.	Creative movement work should be continued to foster gross motor skills and self-image.
B. Fine Motor			
1. To develop finger strength.	Prefers right hand but still switches.	To develop lateral dominance.	
2. To develop pincer grasp of pens and markers.	Still uses palmer grasp.	To develop pincer grasp.	
3. Correct use of scissors.	Holds scissors with two hands.	To develop proper use of scissors.	

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
Activities: cutting, pasting, drawing, painting, bead stringing, pipe cleaners, zipper board.			
III. COGNITIVE			
A. General Knowledge			
1. To learn letters of her name. Actvities: Letter book, sandpaper letters, plastic letters.	Knows letters in her name some of the time.	To continue work on letters of her name. To learn other letters of the alphabet.	
2. To learn basic shape names. Activities: Large geometric shapes; lotto; book on shapes, identifying shapes in classroom.	Knows basic shapes.	To recognize shapes around the classroom.	
3. To learn color names. Activities: Geometric shapes, coloring book, crayons.	Knows basic colors.	To learn other than primary color names.	Needs structure, firm limits and great deal of repetition in creative ways to learn.
4. To be able to visually discriminate colors and shapes. Activities: Matching games like concentration and lotto.	Is able to visually disciminate shapes and colors.		

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
B. Behavioral Organizational Skills			
1. To increase attention span.	Needs help attending to task at hand.	To develop greater focusing and attending ability.	She also learns through imitation.
Activities: Use of sand timer; quiet environment; activity chart.			
C. Logical Functions			
1. To be able to sort objects.	Can sort objects using two attributes.	To be able to classify by one attribute.	
2. To develop one to one correspondence.	Can match one to one.	To be able to demonstrate one to one correspondence of five objects.	
Activities: Large bag filled with various items to sort and match; dolls with clothes to match.			
IV. LANGUAGE			
A. Receptive			F is very reluctant to speak on many occasions. Her voice is low, words sometimes slurred and she will never repeat something once said. It is unclear how much she really understands when spoken to. Will need lots of support in the language area.
1. To strengthen auditory discrimination.	Some improvement.	To follow three-step directions.	
2. To follow two-step directions.	Can follow familiar two-step directions.		
Activities: Tape recording, listening to stories, records, direction games.			

F - 5

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
B. Expressive			
1. To increase vocabulary.	Minor increase in vocabulary.	To decrease monologue speech and collective monologue.	
2. To know words of in-class songs.	Knows words to in-class songs.	To encourage socialized speech.	
3. To use complete sentences.	Occasionally uses complete sentences.	To develop more consistent use of sentences.	
4. To repeat something she said if not heard the first time. Activities: Tape recording songs, conversations, letters of her name, puppet conversations.	Will not repeat.	To repeat something when asked to. To use verbal expression in addition to extensive nonverbal expression.	
V. PARENT INVOLVEMENT			
A. Set up trusting relationship.	Nice rapport established.	Continued parent work.	Many cancellations hindered process.
B. Work on limit-setting consistency.	Consistent limit-setting beginning with both parents.	Encouragement in limit setting.	Home tutoring was discontinued due to parents' schedule.
C. Work on routines of the day.	Bedtime routine and transitions very hard.	Designing bedtime routines.	
D. Work on helping parent feel like effective teacher.	Parent feels more competent.	Designing transition strategies.	

Eliot-Pearson Chidlren's School
Summary of Tutorial Work, 1978-79

J

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
To improve J's vocabulary with bool , language cards, lotto, feely box.	Expressive language is a strength for J and her vocabulary has increased.	J need to learn more descriptive words, and expand her sentence length.	
To expand J's understanding of the function of objects with games, discussion.	J has learned more functions for common objects.	J should continue to learn about objects and their functions, particularly beyond her immediate environment (include stores, rivers, etc.).	
To improve J' s fine motor control with puzzles, sewing, cut and paste, blocks, Play-Doh.	J's fine motor skills have developed and improved.	J needs continued help in this area.	
To improve the integration of J's movements by clapping, playing two-handed games.	J is better able to use her hands together and separately.	Continued work with materials requiring two hands is needed.	
To improve J's use of her body through games of Simon Says, Twister, bean bag games, creative movement.	J enjoys body movement activities and has gained more skills.	J will need continued work in this area.	
J needed help in perceptual motor skills, using puzzles, lotto, 1" cubes.	J has improved, but still lags behind in this area.	Continued work, particularly with materials of high interest.	

J - 2

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
J needed to improve her attention span with a choice board, verbal praise, and activities of high motivational strength.	J's attention span has improved. She leaves the room less, stays with her materials longer and accepts limits more easily.	Continued development.	We feel that J will apply more energy to learnin in a simpler environment.
To achieve toilet training by working on in-school in way consistent with basic approach: schedule, high praise.	J is trained.		

Eliot-Pearson Children's School
Summary of Tutoring Work, 1977-78

H

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
I. PERSONAL/SOCIAL			
A. With self			
1. Increase self concept.	Tremendous growth in self image.	Continued support for positive self concept development.	Talking about activities step by step before doing them decreases anxiety and increases productivity.
2. Increase ability to tolerate frustrations and mistakes. Methods: Constant praise; finished products to take home; encouragement to try it alone.	Willing to try new things. Perseveres in things that are difficult. Will seek adult help if too hard.	Continued support for verbally expressing frustrations. To accept his strengths as well as his imperfections.	
B. With peers 1. To take turns and share	Marked increased in positive peer interactions	To play well with a peer without adult assistance (which is beginning to happen).	
2. To play cooperatively with a peer.	Plays very well in tutoring sessions with peer.	To play well with a peer without adult assistance (which is beginning to happen).	
3. To decrease impulsivity in peer interaction. Methods: Inviting peers to tutoring.	Difficulty still with impulsivity in peer interaction.	To control impulsivity using adult support.	

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
Activities: Special paint making, art activities, puppetry, cooking, storytelling, measuring each other.			
C. With adults			
1. To establish trusting relationship with tutors.	Established quickly.	To develop consistent positive social skills in peer interactions.	He is very trusting and relates well to adults. Sense of structure and predictability was critical.
Activities: 'Do not enter' sign, pictorial calendar, tutoring cards, activity schedules.			
Activities for social/ personal development:			
Hide and seek with instruments; bread sculptures, movement games, board games, multitude of art activities; book for Nicholas; planting a seed.			
II. COGNITIVE			
A. Behavioral Organizational Skills			
1. To increase ability to focus on a task.	In high interest activities there is a marked improvement.	To continue ability to focus and attend within classroom environment.	

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
2. To increase ability to attend to a task. Activities: Clear structure - clear beginning, middle, end; chart of schedule for session; funny animal collage; baking clay letters and figures; making fingerpaint, paper plate puppets, making cars; use of timer.	Marked improvement in structured tutoring time.		
B. General Knowledge			
1. To develop familiarity and knowledge of letters: (a) position in space of letters; (b) sequence of letters in name.	Has developed familiarity with letters. Is less resistant to working with them. Knows the letters of his name. Can sequence the letters of his name. Confuses position in space of some letters.	Continued development in letter recognition and number recognition.	He is less fearful of academic type activities. Attention span is shorter (5-10 minutes) for these activities. He will express that it is boring to do these activities.
2. To develop knowledge and familiarity with numbers. Activities: Presented in least threatening way possible; making letters and numbers from clay and sugar dough; making letters and numbers with glue and putting them in a book; board game with letters, measuring activities.	Can count, measure, and recognize most numbers. Can write 0, 8, 1.		

H - 4

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
III. MOTOR			
A. Fine Motor			
1. To develop strength in fine motor skills.	More presistence in activities involving fine motor skills. More toleration for frustration here.	Continued work in perceptual motor and fine motor tasks.	Familiarity with letters and numbers is important before writing them.
B. Perceptual Motor 1. To be able to write his name in sequence. Activities: Potato printing, coloring in letters, cutting collage materials, rolling out clay with fingers, painting and drawing, punching holes, stringing a book with yarn; sandpaper model of name, tracing letters with his finger.	Has difficulty spacing the letters and positioning individual letters.	Attention to problems in spatial relations.	Kinesthetic approach is very helpful. He is a visual-kinesthetic learner. Needs activities to release physical energy built into his day.

Eliot-Pearson Children's School
Summary of Tutorial Work, 1977-78

I

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
To successfully separate from mother.	I has successfully separated from mother and attached to teachers.		
To increase I 's attention span for learning tasks.	I attends for appropriate periods of time (up to 15-20 minutes)	Continued growth in this area, specifically applied to kindergarten tasks.	I displays more of his hyperactivity at home than in school.
To achieve toilet training at home and decrease soiling with a behavior modification plan.	I has stopped soiling at home. He is trained.		
To develop social skills i.e. increase I 's impulse control, learn to identify feelings and verbalize them.	I has grown in this area. He can verbalize his feelings although he occasionally tries to manipulate adults by silence.	Continued work in this area, particularly to decrease his manipulation of others.	
To develop pre-reading skills by learning letters in his name, with stories, lotto, etc.	I has learned the alphabet and knows the letters in his name.	To continue readiness skills by learning beginning phonics and developing a sight vocabulary of high interest words (car, Joey, Mom Dad, etc.).	
To develop concepts of number through games, manipulations.	I can count to 10, can seriate and sort within 5.	Continued development of concepts of number and solving simple problems in readiness for first grade.	

Eliot-Pearson Children's School
Summary of Tutoring Work, 1977-78

L

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
To increase L's use of language by: Successful adjustment to school, not talking for him, discussing his worries about articulation with him.	L does talk frequently now using sentences to communicate his needs and thoughts.	L needs continued support in this area so he won't regress.	
To isolate sounds that are difficult and arrange play situations where he would use them.	L's articulation has improved.	L will need continued work with articulation of specific sounds.	
To increase L's awareness of visual-tactile aspects of sounds by emphasis only.	L's improvement of articulation is an indirect result of this.	L will need continued work in this area with difficult sounds.	
To monitor L's fine motor skills through cutting, puzzles, drawing, etc.	L's fine motor skills are age adequate. He can draw a , + , . He can cut a line, build a nine-cube tower.	Continued work as appropriate to his age.	

Eliot-Pearson Children's School
Summary of Tutorial Work, 1977-78

M

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
I. PERSONAL/SOCIAL			
A. With self			
1. To understand own emotional responses.	Frequently discusses emotional issues.	To continue to feel competent and independent.	Consistent limit setting is critical.
2. To understand emotional responses of others.		To have sense of mastery and control over her environment.	Clarification, modeling and reinforcement are helpful.
3. To feel safe.	Feels safe.		
4. To reduce anxieties and fears.	Has developed greater self-confidence.		
All done through consistent clear limits; discussions; reminders that she was safe; appropriate explorations of fears. Puppets, books and own stories about feelings.	Shows others what she is capable of doing.		
5. To be able to make transitions more easily.	Is able to make transitions much more easily.	Continued support in making transitions.	Reduce abrupt transitions and excessive change. Use of transition objects is helpful.
Use of predictable routines, concrete references - calendar, story at beginning and end of time; warnings when change was coming.			

M - 2

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
B. With peers			
1. To establish and sustain interaction with a peer with adult assistance.	Made and sustained friendship and interaction with child from home visit.	Other home visits with peers.	
2. To improve overall socialization skills. By use of games that required cooperation with others, inviting peers on trips and into activities; encouraging Heather and peers to teach each other; inviting another child to her home and assisting in the whole process.	Can interact with peers for short periods of time without much adult intervention.		
C. Self-help			
1. To develop skills in dressing, tying shoes, brushing teeth and hair.	Dresses self. Ties own shoes. Control over own care.	Select own clothes. More consistently brush hair, teeth, and wash self.	
II. LANGUAGE AND COMMUNICATION			
A. To develop appropriate verbalizations of feelings, fears, etc.	Uses appropriate language to communicate needs and concerns.	Sustained interactive speech needs to be encouraged.	Clarification and reinforcement for improvement are necesary techniques.
B. To develop appropriate use of expressive language.			

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
C. To reduce self-absorbed language and encourage spontaneous interactive speech. By providing appropriate models and alternatives to inappropriate speech, i.e. to reduce verbal assaults by saying what she didn't like and offering thoughts about what she may prefer to happen. Large cookbook and cooking activities; art activities; books.	Expresses feelings in peer interactions.	To continue to be able to focus when there are distractions. To be able to stop and take pride in her work.	Concrete stimulating highly organized activities are best, i.e. self-help charts, cookbook, cooking projects.
III. BEHAVIORAL ORGANIZATIONAL GOALS			
A. To be able to focus on activity for at least 15 minutes. B. To be able to attend. C. To be able to evaluate progress. D. To be able to stop. Monitoring distractions - very few; only one other child around. High degree of structure. Kinesthetic and concrete input critical.	Able to focus and attend for as long as 50 minutes when activity involved in manipulating materials. Knows when she is finished. Works well in tightly structured situations. Also learning to stop in much less structured situations.		

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
IV. PARENT INVOLVEMENT			
A. To establish open relationship.	Excellent rapport.	To foster constructive of art materials in the home.	Home tutoring highly successful. Both parent and child are much more confident.
B. Limit setting techniques.	Limit setting especially around routines' success.	Continuing home tutoring to foster growth. Helping parents with general limit setting. Helping parents design physical environment.	
C. Having fun with Heather.	Potential change in physical environment to accomodate children's materials.	Helping parents design physical environment.	
D. Ease family routines.			
Modeling, discussions, problem-solving session, phone contacts.			
V. MOTOR SKILLS			
A. Gross			
1. To develop greater body awareness.	Much greater self-confidence in body awareness and control.	Continued growth in this area.	Continued creative movement or some physical program.
2. To develop greater motor planning ability.	Can swing, hop, and recover nicely from falls.	Develop balance reaction. Develop parachute reaction.	Should be done by trained O.T.
3. To develop greater body control	Much more willing to take risks motorically.	Develop sensory motor integration.	
a. to learn to swing			

M - 5

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
b. to learn to hop			
c. to learn to recover form falls.			
Creative movement, free play on playground with tutor.			

Eliot-Pearson Children's School
Summary of Tutorial Work, 1977-78

N

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
I. To develop fine motor skills.	Increase in ability to pick up and manouever small objects.		
A. To prepare for writing readiness.	Willingness to write her name.	To be able to write her name without assistance.	
	Attempting to represent objects on paper.	To be able to write from left to right.	Seems confused by left-handedness. Need to develop left to right orientation.
B. To perform tasks such as sewing.			
C. To reinforce her left hand preference.	Using left hand consistently.		
Activities: Cooking, tracing, coloring within the lines, cutting, pasting, stringing beads, sewing, weaving.			
II. LANGUAGE			
A. Receptive			
1. To follow two-step directions with emphasis on simple directions.	Is able to follow two-step directions. Is able to understand simple requests.		Auditory processing skills are weak. N is a visual-kinesthetic learner. Needs simple, clear auditory input to avoid auditory overload.

N - 2

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
2. To sharpen auditory skills of discrimination, sequencing, and memory. Activities: Replicating sound patterns with mucial instruments, following directions within structured activities such as cooking.	Some improvement in auditory skills.	Reinforcement of auditory skills through multimodality approach -- auditory-kinesthetic, visual-auditory.	Minimum amount of noise and distraction are important for her learning. High amounts of noise tend to arouse her and cause her to be very distracted from the task at hand.
B. Expressive			
1. To encourage verbal expression.	Longer utterances.	To use complete sentences. To use plurality more frequently.	This is most impaired area and requires ongoing speech therapy and language stimulation in the classroom and home.
2. To answer in complete sentences.	Speaking more frequently in sentences.	To use subject, verb, object construction.	
3. To increase vocabulary.	Increase in vocabulary.		
4. To use correct verb tenses. Activities: Relating a story, describing objects, labeling common objects, modeling correct syntax and grammar with repetition by child, puppet play, verbal mediation by tutor.	Inconsistent use of verb tense correctly.	To use correct verb tenses and demonstrate understanding of them.	

N - 3

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
III. COGNITIVE			
A. General Knowledge			
1. Letters			
a. To recognize letters in her first name	Recognizes and names letters in her first name.	To increase general knowledge through new experiences.	
1) individually			
2) within other words	Can identify them in other words.		
3) to identify them verbally			
4) to label objects in her home which begin with letters in her name			
5) to write the letters of her name in sequence with model and without model	Can't write letters in sequence.	To be able to write name without assistance. To work on all sequencing activities. To learn concept of next.	Needs lots of sequence work both auditorily and visually. Also cognitive sequencing.
b. To recognize other letters of the alphabet.	Does not recognize other letters of the alphabet.	To recognize other letters of the alphbet.	
Activities for name and letters: Sandpaper letters, pretzel and Pla-Doh letters. Printing name on finished products, tracing letters in flour,			

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
tracing with paper, making labels for objects in the home, practice verbalizing letters and tactile-visual reinforcement were used; flash cards, concentration, alphabet lotto.			
2. Shapes			
a. To discriminate basic shapes:	Is able to discriminate and label shapes:	To label diamond shape and to recognize it.	
b. To label shapes verbally			
Activities: Fishing game, shape puzzles, attribute blocks, tracing shapes, shape lotto.			
3. Colors			
a. To be able to consistently discriminate colors	Can name all primary colors.		
b. To be able to verbally name colors.	Can name brown, black, white.		
Activities: Color lotto, concentration, labeling, beads of differing color and shape, attribute blocks.			

N - 5

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
1. Numbers			
a. To increase mastery in counting and number recognition.			
Activities: Counting objects, attribute blocks, flash cards, tactile numbers.			
5. To improve sequencing skills and matching skills.	Not much improvement in sequencing.	To improve sequencing skills.	
a. To develop reading readiness - left to right sequence.	Good mastery of matching skills.	To improve left to right orientation.	
Activities: Recipe book - turn the page after each step was completed; match beads to cards from left to right. Weaving cards.			
B. Logical functions			
1. One-to-one correspondence.	Demonstrating beginning understanding.	To improve one-to-one correspondence.	This area is the other greatly impaired area of development. She requires a great deal of repetition and consistent structuring to learn.
2. To be able to classify objects by one attribute.		To develop problem-solving skills.	
Activities: Attribute blocks, cups and saucers, beads in holes.			

N - 6

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
IV. PERSONAL/SOCIAL			
A. With peers	Developed nicely both in tutoring with sister and in classroom.	To demonstrate continued growth in social skills.	
1. To take turns			
2. To cooperate with a peer		To demonstrate greater impulse control when angry or hurt, instead of physical aggression.	Because of langauge deficit this is very difficult for N .
3. To take leadership roles in activities	Took on leadership roles with adult assistance.		
B. With adults			
1. To develop trusting relationship with tutor.			
Activities: Turn-taking with sister, using materials where N designs activity, such as blocks.			
V. FAMILY INVOLVEMENT			
A. Good working relationship between N and sister.	Home tutoring was highly successful. Good working relationship between N and sister.	Continuation of home tutoring if possible.	
B. To help sister use home materials to teach N .	Use of home materials very extensive.		
C. To foster positive limit setting between N and sister.	Limit setting done with firmness and fondness.		

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
D. To decrease harshness of limit setting.	Positive modeling accomplished.		

Eliot-Pearson Children's School
Summary of Tutorial Work, 1977-78

Q

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
I. BEHAVIORAL ORGANIZATIONAL SKILLS			
A. To increase attention span (1) in tutoring; External structuring--activity box, choice board, activities allowing movement--Simon Says.	Increase in 1 to 1 tutoring with highly motivating materials.	Increased attention span in all areas of operation including both teacher- and non-teacher-directed activities.	Requires a highly structured, organized approach to help her in behavioral organizational skills. Must have legitimate reasons for movement.
(2) in free play activities; Activities incorporating movement; food activities.	Increase in attention span in specific areas, i.e. houseplay and in cooking activities.		
B. To be able to stop External structuring--clear beginning and ending, choice board.	Inconsistency is still prevalent dependent on Q's mood.		
II. PERSONAL/SOCIAL			
A. With self (1) to be able to relax; (2) to be able to recognize and verbally express feelings; (3) to develop a more positive self image.	Occasionally relaxes in specific activities such as houseplay, cooking, creative movement. Still unable to express feelings although she seems more in touch. Stronger self-image.	Continued work in all these goals is required: -to relax -to express feelings -to develop more positive self image.	Requires concentrated effort for both child and mother. Recommended breathing exercises, movement activities and supportive environment will all be helpful.

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
B. With peers			
(1) to play cooperatively wih a peer for 15 minutes (2) to play associatively with small group (3) to develop appropriate play themes.	Unable to play cooperatively without adult assistance. Able to play associatively without adult assistance in houseplay especially. Has developed appropriate play themes.	Continued development in social interactions with children: -to share materials -to take turns -to monitor impulsive actions in play	Needs lots of adult support to reach these goals--in both structured and unstructured times.
III. READINESS SKILLS			
A. Letter Recognition Fish game; alphabet lotto; concentration; letter feely box.	Can reconize letters in her name, brother's name, tutor's name	Continued work in letter recognition is imperative.	Use of tactile cues important. indicates repetition of kindergarten.
B. To write name consistently in correct sequence without letter reversal. Letter feely box, sandpaper letters, fishing game, Play-Doh letters of name.	Name is written in sequence more consistently. The letter n is still reversed.	Continued practice in writing her name.	
C. To be able to conserve number up to 10. Objects to count and manipulate, i.e. small blocks, marbles.	Can now do this.	Continued progress in logical functions is imperative.	

OBJECTIVES	OUTCOMES	FUTURE OBJECTIVES	COMMENTS
IV. LANGUAGE			
A. Expressive (1) To develop clearly articulation	Very little progress here.	To be able to use blends correctly.	Requires highly structured speech therapy.
(2) To develop more appropriate grammatical constructions		To be able to correct omissions and substitutions.	
Modeling; making Play-Doh and peanut butter; read nursery rhymes, have her repeat lines		To be able to develop appropriate syntax and grammar.	
V. MOTOR			
[illegible] Perceptual Motor (1) to develop eye-hand coordination	Some improvement overall especially in sewing.	Continued support in perceptual motor and fine motor areas.	Use of tactile-kinesthetic method highly successful.
Sewing activities			
(2) To develop cutting ability.	Cutting still imprecise. Use of pencil much stronger.		
Cooking exercises - measuring, cracking peanuts, making Play-Doh letters, tracing, dot to dot, cutting and pasting.			
VI. PARENT INVOLVEMENT			
(1) To establish rapport.	Good rapport established.	Continued work in relaxation and limit setting.	Therapy recommended and is being followed through at Somerville Family Services.
(2) To keep parent relaxed.	Able to relax somewhat in tutoring.		
(3) To establish limit-setting procedures.	Limit setting cone in calmer, more consistent manner.	Home tutoring to be continued if possible.	
Phone conversations, weekly visits, problem-solving discussions.			

b. Small Teaching Groups

The small teaching groups bring together children with similar abilities in particular areas. These groups might concentrate on language stimulation, fine motor skills, gross motor abilities, or movement and music. They are not exclusively composed of children with special needs, although their primary objective is to help children in a small group setting acquire competence in an area of weakness.

It should be noted that teaching groups are temporary groups arranged to meet particular needs. They should be distinguished from systematic ability grouping, or tracking. Teaching groups derive much of their effectiveness from their potential for individualization. Thus, a child with poor language skills but highly competent fine motor abilities need not be segregated into a slower group for all of his classroom experience simply because of his language disability.

During 1977-78 there were five separate small teaching groups: three creative movement groups and two "making things" groups. The groups met twice a week for forty-five minutes to an hour and were led by the special needs resource teachers with undergradute student support. These groups consisted of four to six children. They were mainstreamed. A total of nine special needs children received services from the small teaching groups. Children chosen for these groups were those who could benefit from small group peer interaction plus individual attention. Problem-solving skills, gross and fine motor skills, language development and social/emotional development were areas focused on in the groups. One creative movement group was offered all year. Two other movement groups met second semester. The making things group was given once each semester.

c. Home Teaching

In the fall of 1977-78 the Children's School continued its program of home-based training, or intervention. Although some of the children who received home-based training continued to have tutorial sessions in school as well, the home program is designed to be an alternative to in-school tutoring (although still only an accompaniment of the center-based program). A total of nine special needs children received home teaching in 1977-78.

The rationale for the development of the home-based (or, more accurately, home-and center-based) program emerges largely from the data concerning early intervention for high-risk and disadvantaged children. Numerous studies cite the presence of adequate opportunity and status for parental activity as the most critical factor affecting the early development of these at-risk children (cf., Bronfenbrenner, 1974; Heber _et.al_., 1972; Karnes _et.al_., 1970; Skodak and Skeels, 1970).

Furthermore, research indicates that parent-child, or home-based intervention may have a catalytic effect on the impact of group intervention. That is, children involved in a home-based program are likely to achieve greater or longer lasting gains in the group program (cf., Bronfenbrenner, 1974; Gilmer _et.al_., 1970; Radin, 1969). In Bronfenbrenner's words,

> The evidence indicates that the family is the most effective and economical system for fostering and sustaining the development of the child. The evidence indicates further that the involvement of the child's family as an active participant is critical to the success of any intervention program. Without such family involvement, any effects of intervention, at least in the cognitive sphere, appear to erode fairly rapidly once the program ends. In contrast, the involvement of the parents as partners in the enterprise provides an on-going system which can reinforce the effects of the program while it is in operation, and help to sustain them after the program ends. (1974, p. 55)

With this rationale in mind, the following plan of action has been developed.

a. _Selection of children_: based on need of parent for support, ideas and general assistance; and on need of children for more frequent and intense tutoring than that available in school.
b. _Procedural arrangements_: takes place in family's home one hour per week; parent contracts to do program with child daily for a minimum of ten minutes to a maximum of one hour.
c. _Personnel_: tutors are either special needs resource teachers or experienced students working under their supervision.
d. _Program_: objectives focus primarily on behavior in the home; whenever possible parental goals and ideas

as well as materials already available in the home are incorporated into objectives.

e. Assessment: identical to classroom assessment, but also includes observation of parent-child interaction and observation of child in the home.

f. Typical session: composed of greeting, review of week's materials, presentation of new material, opportunity for child and parent to use new material, general conversation and questions.

g. Record-keeping: both parents and tutor keep records: either a journal or chart.

h. Evaluation of child change: development of skills as reported by family, tutor and classroom teacher.

i. Evaluation of family change: attitude of parent(s); consistency of appointments; consistency of program carried out in home; observations in the home; reports from classroom teachers.

Each of the families and children that received home teaching differed in many significant respects from other families involved in the home teaching program. However, the elements identified above describe the structure of the program in general.

In Appendix 2 a sample tutorial report of a child who received tutoring both in school and at home is included. Every special needs child who receives one-to-one tutoring or home teaching has a report of this type prepared. A copy of the report is given to the parents and another copy is placed in the child's file. The report gives a comprehensive overview of the tutorial arrangements, assessments, remediation activities and recommendations for further intervention.

A more anecdotal report of the goals, activities and progress of one child receiving home teaching follows. This report underlines the school's efforts to integrate the parent into the instructional process. It also shows how a parent-based tutorial program can be designed to utilize an individualized exploratory approach to teaching and learning.

Ronnie: A home-teaching report

Ronnie was identified as showing some developmental lag in the motor and language areas. In the fall his fine and gross motor movements were particularly awkward. Since Ronnie's classroom teacher specialized in music and movement, it was felt that home teaching might best focus on fine motor skills, language development and behavioral concerns raised by his mother.

Ronnie was tutored by one of the Special Needs Resource Teachers one hour per week for the school year. At each session the mother, Ronnie and the Resource Teacher would explore two or three materials or games together in the kitchen. The activities most often included a fine motor experience coupled with a language or general cognitive focus. Examples of activities include cooking and manipulative playdoh, pegs and boards, stencils of numbers and his name, printing, a nut and bolt puzzle, sticker pasting, one-inch blocks and collage. Non-messy activities were preferred by the mother and this was respected. During the sessions language stimulation was provided through modeling, discussing the tasks and conversing amongst us.

A major additonal part of our work was general discussion of the mother's concerns or communication from the school about Ronnie's classroom experience and difficulties. Topics discussed included toilet training, Ronnie's desire and need for a bed instead of a crib, his eating patterns, limit setting ideas and his behavior in general. The school also wanted Ronnie to have a neurological evaluation and conversation about this took place in the home as well.

Ronnie made enormous gains during the year. These cannot be attributed totally to home teaching, of course, but it was clearly a comfortable format for the mother, and it was enjoyed by all three participants.

Ronnie's language development, as evaluated by the Gesell and informally, has reached his chronological age. His cognitive skills are age-adequate as well. Although he still exhibits awkwardness, motorically he has grown over a year in a year's time. Ronnie has also grown socially. He can dress and undress himself in school, he manipulates buttons, zippers and buckles and can toilet and feed himself as well. Ronnie has learned to express his needs verbally and his behavior is generally within his control.

The objectives of the home teaching program were apparently met. Ronnie has his own bed now and his mother continues with the activities on her own. Recent evaluations on the Gesell and McCarthy indicate exceptional advances in all areas.

d. Problems and prospects for Other Direct Services

The tutoring program as a whole seemed to benefit the children and their families. Many gains attained in the tutoring sessions were carried over into their classroom and home experiences, as reported by tutors, teachers and parents.

However, a number of procedural problems were encountered with one-to-one tutoring. First children were sometimes reluctant to leave their classrooms. For some, tutoring intruded on their time with their peers. Second, the student tutors felt awkward trying to remove children when it was not natural or desired by the child. A third problem concerned the addition of more adults to the classroom when the tutors arrived to take their children. Tutors often spent time in the classroom before tutoring, thus increasing the adult-child ratio beyond an appropriate level. Children were not given the option of chosing not to go to tutoring.

For the small groups some children did not want to leave their classrooms either. After trying several sessions those children were permitted to choose whether or not they wanted to continue in the group. When children dropped out others were chosen or selected to come in their place.

In the home teaching program service to one of the families had to be discontinued because of lack of time on the part of the parent. This child ultimately received tutoring work at school only.

These problems will be addressed as follows: Plans for the future involve a shift from one-to-one in-school tutoring to more home teaching. Home teachers will be students from the Practicum in Special Needs course as well as the Special Needs Resource Teachers and other staff from Eliot-Pearson Children's School. When one-to-one tutoring is indicated, it will primarily take place before or after the child's class meets. There will be exceptions to this, again based on the needs of the child, concerns of the families and of the classroom teachers. The small groups will continue meeting as they did this year. An expanded creative movement program is being considered in which the Special Needs Resource Teacher or students would go into the classroom for movement with any interested children. Plans are to focus on a consistent core of children involved with the small groups; others will have the option of participating or not.

Continued coordination with the classroom teachers, students and families will be done by the Special Needs Resource Teachers to ensure continuity of the child's program.

4. Supplementary Services

No other supplementary services are provided to children at Eliot-Pearson other than the tutorial groups and small teaching groups described above. Several special needs children received additional services outside of school (e.g., physical therapy. speech therapy, psychotherapy). However, these services were not provided by the project. In 1977-78, both a speech therapist and a physical therapist consulted with the staff of the school on an as-needed basis.

5. Screening

The Children's School does not perform screening *per se*, although some screening is a natural outgrowth of our intake procedures. In general. we try to interview children for admission who have a good probability being accepted to the program.

In the case of special needs children most of our intakes result from referrals from cooperating agencies, LEAs or clinics. A great deal of diagnostic information is usually made available in the course of each of these referrals. Thus, it is possible for us to interview very selectively for the small number of openings we have available each year. In the spring of 1977 intake was begun for the school year 1977-78. More than 50 non-handicapped children were interviewed for the 44 openings for new children (38 children were returning). Of those interviewed, one child was identified as a child with special needs (learning disabled, developmental lag).

Since 12 special needs children were returning to Eliot-Pearson in 1977-78 and only 18 places were available in all. there was room for six new special needs children. More than 15 handicapped children and their families were interviewed for these slots. The families of those children who were not accepted were given suggestions as to other programs in the area. Acceptance was based on type and severity of child's handicap, predicted mix with other children already accepted. availability of age-appropriate classroom, willingness of parents to participate in program and geographic location (Somerville and Medford receive preference). We received more than 50 requests from parents and referral sources concerning availability of places. Unfortunately, we could consider only a small number of these requests.

B. Slippages in Attainment

1. None

C. Spinoff Developments

1. Practicum with Special Needs Children

For the past three years, the Practicum in Special Needs, CS 192 S, has been offered as a regular course in the Department of Child Study. It will continue to be a major element in the Department's special needs curriculum.

This course, taught jointly by the Special Needs Resource Teachers, focuses on providing a practicum experience for college students with the pre-school special needs children enrolled in the School. Each college student works with one special needs child either in a home teaching situation or within the school.

The course emphasizes the School's developmental approach in working with special needs children. The child's strengths and interests are assessed as well as areas of need, and an individual program is developed. In most cases the tutoring is home-based with the involvement of the child's parents.

Topics addressed in the course include informal assessment, individualization, consultation with parents, limit-setting, and curriculum development in addition to information on specific handicaps. Pre-school programs serving special needs children are reviewed and critiqued. The format for the course includes content and supervision.

II. PARENT/FAMILY PARTICIPATION

A. Accomplishments

1. Rationale. Parent involvement is an important aspect of the Children's School program for all parents in the school. Families are not required to participate in the classroom, but are often asked to do volunteer work in the class and may observe at any time. There is a Parents Organization which organizes activities for parents. These activities include fund-raising, educational meetings and staff-parent social activities. This year the School has provided a number of ongoing discussion groups for parents both of handicapped and of non-handicapped children.

In general, in the case of parents of special needs children, a number of principles guide the School's actions (cf. Gorham, et al., 1975). First an effort is made to involve parents as much as possible in their child's program, from evaluation through classroom procedures. Second, a realistic management plan is made part of the child's initial assessment, and is then implemented with the help of the teacher and special needs coordinator. Third, parents are informed of useful community resources and local parents organizations. Fourth, school reports are written in clear, understandable, jargon-free language; these reports are shared with parents during conferences. Fifth, it is made clear to parents that no diagnosis is final and unchanging; diagnoses and labels are useful only to the extent that they facilitate teaching and remediation. They are subject to alteration as more is learned about the child. Sixth, the parent is given assistance in thinking of life with this child as an ongoing, problem-solving process -- as is the case with non-disabled children. Finally, the parent is helped to recognize his or her child's abilities and assets, as well as the child's disabilities and deficiencies. What a child can do is as important as what he cannot do.

2. Direct Service. Parents of special needs children receive direct service from a number of different staff members. The most continuous relationship with parents is fostered by the child's teacher. Numerous contacts between teachers and parents have taken place, including short chats when dropping off or picking up children, telephone contacts, home visits and conferences between the teacher and both parents. These contacts serve to inform the teacher of the child's history and adjustment to school, to share the child's progress with the parents, to plan mutual goals for the child and to share the parents' fears, concerns and preferences.

All parents at the Children's School are invited to participate in a variety of activities focusing on their children. Each teacher arranges two or three evening room meetings to discuss the classroom program. Parent-teacher conferences occur twice a year at a minimum, although conferences take place as often as needed. Parents are also invited to serve as assistants in the classroom. Most parents spend at least two class sessions per year "parent-helping." Our observation booths are open to parents four out of every five days. In addition, a number of discussion groups for parents are offered. Each of these services will be described in the sections that follow.

a. Home Visits. Initial home visits are made by the Special Needs Resource Teacher and usually the classroom teacher either during the summer prior to school entry or at the beginning of the school year. The parents and child have already been to the school and have met the classroom teacher and the Special Needs Resource Teachers. A visit lasts approximately one to one and a half hours. This is a time for becoming acquainted, asking and answering questions and sharing general orientation information.

b. Individual Conferencing. Individual conferences occur at least twice during the school year. Conferences are held with the classroom teacher and the Special Needs Resource Teacher, sometimes singly and sometimes together. The mid-year conference is usually led by the classroom teacher. The end of the year conference includes both the teacher and the Special Needs Resource Teacher. Many of the families request several conferences during the course of the year.

Another source of contact is frequent phone calls from the classroom teachers and Special Needs Resource Teachers dealing with particular issues, or just checking in to find out how things are going. Telephone calls occur once or twice a month with each family.

c. Coordination of Supplementary Services. Any additional services needed for the special needs children are arranged or pursued by the Special Needs Resource Teachers. Services include speech, neurological and psychological evaluations, confirming that speech therapy is being provided by the child's LEA as per the educational plan, and maintaining ongoing communication with outside therapists or agencies working with the child and the family. Families are also accompanied by the Special Needs Resource Teacher to evaluations when appropriate.

d. Out of School Placement. For children leaving Eliot-Pearson, the Special Needs Resource Teachers pursue all possible options for the child. The search begins within the city or town in which the family resides. Visits are arranged for the Special Needs Resource Teachers and the parents to see the classroom(s) that the town is suggesting for placement. If the placement is appropriate, the classroom and teacher are written into the child's educational plan. Out of district placements are also viewed if the town does not seem to have the appropriate services or if the parent is interested in pursuing a private placement.

e. Parent Groups. There are three types of discussion groups available at the Children's School: guided observation groups, a support group for parents of special needs children and topic-oriented classroom groups. Guided observation groups occur twice a year and are led by the Associate Director. Parents of each of the school's five groups are invited to observe their child's classroom on a particular day. Following an hour's observation, the group meets with the Associate Director to discuss the observation. Topics that arise include the school's philosophy and curriculum, child - child interactions, teacher behavior, the rationale for the integrated program and topics related to child rearing.

The support group for parents of special needs children meets bi-weekly under the guidance of the school's two special needs resource teachers. This group is the only parent group in the school that is restricted to families of special needs children. The purpose of this group is to create a non-threatening environment in which parents can express and explore their feelings about being parents of handicapped children. Issues are approached in a supportive manner and the group leaders take extreme care that all individuals participating in the group feel listened to and respected. Although "problem-solving" in orientation, the group nevertheless fulfills a therapeutic function as well.

For 1977-78 two support groups were planned: one for the fall semester and one for the spring. The group's purpose, schedule and format was discussed with each of the families during the home visits in July, 1977. Parents who were interested were asked to commit themselves to the six sessions either fall or spring, as continuity is considered very important for developing trusting relationships within such a group.

The meetings were scheduled for alternate Tuesday evenings from 7:30 - 9:00 P.M. The Special Needs Teachers co-led the support groups.

The session began with an activity that would acquaint the participants with each other, or would help focus on the feelings of the moment. As the activity was discussed, concerns from the previous two weeks, current problems and thoughts would be expressed and the session would respond to these and other topics. It was open-ended. Occasionally articles were distributed that related to topics discussed in a session.

During both the fall and spring we discussed both school-related concerns and family-related concerns. School issues included discipline, carpooling problems, toilet training, scapegoating experience, and growth seen in the children.

Home-related issues were the most involving and included the effects of having a special needs child on the marriage, the need for hope, negative feelings towards the child, feeling isolated, difficulty re-defining expectations, reactions of others (family, friends, strangers), issues of death and more. We shared many profound conversations that seemed to help each member feel less alone and ashamed of some of the feelings. Some members of the group became friends and had contact between sessions. Two families spent Christmas together.

During the spring semester, some of the families became involved in trying to find placements for their children for the coming school year. The transition from Eliot-Pearson to public school has never been easy; it is always difficult for parents to leave such a supportive environment and go to the larger, often harsher world of the public school. This problem is complicated further when the child has special needs. This fact, added to the pain of separation makes the transition for parents a difficult one. As some of the families were experiencing this transition the support group's tone often became angry: angry at mainstreaming, angry at Eliot-Pearson or angry at their child. Anger is part of the separation process, just as sadness and anxiety are.

In 1978-79, the support group for parents of special needs children will be continued. It will again be offered in two sections, one in the fall and one in the spring. One parent from each family will be required to participate either in the fall or the spring. The school has come to believe that the groups are so important and supportive for families that everyone should have an opportunity to participate.

A third type of group is the topic-oriented classroom group or didactic group. These groups are open to the parents in a particular classroom and take place approximately three times per year. The groups are mainstreamed and led by school staff members with occasional "guest" participation. Examples of issues dealt with in these evening sessions are:

a. the transition from three to four year old behavior;
b. plans for future schooling;
c. carry-over of the school program to the home;
d. workshop on making toys with your children;
e. separation and child-rearing issues.

Frequently, discussions about mainstreaming issues take place in these meetings. The school staff has come to prefer this format over the large all-school meeting format because of the greater intimacy and sense of commitment offered by the group of parents from the same classroom.

3. Advisory Council. The membership of the project Advisory Council is listed below. All members of the council are parents in the Children's School. The selection of this group of individuals, rather than a Council chosen largely from outside of the school population is deliberate. The Project Director and other school staff and Department members have sufficient contacts so that easy access to resources can be made. The Advisory Council, on the other hand, is in an excellent position to advise

the Project Director and keep the school population informed and actively involved in project activities and objectives.

Its major objectives in 1976-77 were to review a slide-tape for parents entitled, "Parents Talk About Mainstreaming;" to develop a resource library for parents in the Children's School; to form small affinity groups (no larger than ten) to meet with other parents in the Children's School to explain the objectives of mainstreaming; and to invite public school special education administrators to Advisory Council meetings in order to try to influence policy in local education authorities.

The membership for 1977-78 was as follows:

1. Andrea Slavin
2. Ken Beardsley
3. Linda Beardsley
4. David Drummond
5. Joy Drummond
6. Nora Wells
7. Ronald Frashure
8. Roberta Frashure
9. Kathy O'Donnell
10. Mary Simeone

4. Assessment of Parent Attitudes and Perceptions

An attempt was made to study the attitudes and perceptions about mainstreaming of parents whose children were enrolled at the Children's School. No such attitudinal study has been previously published. One assumption of early childhood integrated programs is that young children readily accept or accommodate to differences among their peers. Parents, however, may be more resistant to the integration of handicapped children.

In the present study, a 36 item questionnaire was designed to measure three dimensions of parents' reactions to their children's mainstreaming experience (see Appendix 3 for a copy of the questionnaire). These dimensions included their present attitudes toward mainstreaming, their perceptions of the effects of the mainstreamed program on their children; and the perceived effects of the program on themselves as parents. Items were constructed to measure each dimension and the resulting Likert-type scale was purified using an item analysis. Satisfactory coefficients of internal consistency were obtained.

The questionnaires were administered to all 79 families of children enrolled at Eliot-Pearson. Sixteen of the 18 families of handicapped children (H) responded, while 44 of the 61 families of non-handicapped children (NH) responded.

The results indicated that although both groups of parents had a generally positive attitude toward mainstreaming. the H group had a significantly more favorable rating ($t = 3.19$, $p < .002$). The favorability ratings were 1.86 for the H group and 2.33 for the NH group (on a 5 point scale with 1 being most favorable). Examples of particularly discriminating items in this cluster included: "I feel more positive about mainstreaming as a result of my child's experience in the program this year." ($t = 3.80$, $p < .001$) and "If I had it to do over I would choose a mainstreamed program for my child" ($t = 3.24$, $p < .002$).

Parents had a generally positive view about the effects of the program on their child, with means for the H group of 1.81 and for the NH group of 2.10 ($t = 2.26$, $p < .05$). An example of a discriminating item in this cluster was, "My child's mental, physical and emotional development has increased even more than I expected as a result of being in the program this year" ($t = 4.14$, $p < .001$). No differences were found in parents' perceptions of the effects of the mainstreamed program on themselves as parents. Parents in both groups felt that the program had had neither a positive nor a negative effect on them.

In general. the parents of handicapped children (H) reacted more favorably to mainstreaming than did the parents of non-handicapped children (H). However, the differences between the groups were in degree of positive response. The high level of positive responses implies that given a well-developed regular pre-school or kindergarten classroom, the integration of handicapped children can lead to parental acceptance of diversity.

One caveat must be entered. That is, the questionnaire was administered at the end of the school year. hence the results reported are seriously contaminated by the parents' overall reaction to their children's school experience. This factor greatly compromises the validity of the data collected in this manner.

B. Slippages in Attainment

In April. 1978. we attempted to contact the families of all handcapped children who had attended Eliot-Pearson and had left for other school settings. We hoped to find out what kinds of educational experiences these children had had since leaving Eliot-Pearson and how they had been developing since then.

Unfortunately, despite numerous reminders and phone calls, only two parents returned our questionnaire; hence. no results can be reported. A copy of the questionnaire is included in Appendix 3.

C. Spinoff Developments

As a result of several classroom meetings about mainstreaming in one group during 1976-77, one teacher volunteered to lead an integrated "support group" for all the parents in his class. The purpose of the group was to offer a more intensive opportunity for all parents to discuss issues of parenting, mainstreaming, child-rearing, etc., than would otherwise be possible in the Children's School. The group was composed of parents of special needs and non-special needs children. Its effects on parents' attitudes toward themselves, their children and towards mainstreaming appeared to be very positive, judging from parents' response in the group and the increased involvement of handicapped and non-handicapped children with each other outside of school time.

III. ASSESSMENT OF CHILDREN'S PROGRESS

A. Introduction

Throughout the period of the demonstration project, the development of assessment procedures for evaluating children's progress was a high priority. The documentation and evaluation of children's progress in the open-structure classrooms at Eliot-Pearson is very complex. These classrooms do not lend themselves readily to typical forms of assessment via behaviorally-observable objectives. The program in each classroom is highly individualized, non-standard and created by the teaching staff--not prescribed by a pre-established curriculum. Personal/social issues--which are notoriously difficult to document and assess--form a primary focus of the school's program.

Thus, a variety of approaches or methodologies were developed, modified and implemented by the Project. Three approaches to program impact were utilized: a qualitative approach, a quantitative approach, and a mixed measurement approach. In this section each of these orientations will be described, data will be presented, and conclusions drawn.

The three approaches strongly support one another. Indeed, the mixed multiple measure approach is, by definition, an integration of qualitative and quantitative methodology. It was not until the conclusion of the third year of the project that this design became clear and workable. Thus, the discussion of the mixed multiple measure approach is less specific than the other two approaches. In this report, this methodology is presented in a chapter entitled "Assessing the effectiveness of open classrooms on young children with special needs," to be found in Section 3 below.

B. Accomplishments

1. Qualitative Methodology

Individual Child Progress Reports. In the Eliot-Pearson program the organic approach to individualized curriculum development that is relied upon particularly hinders efforts at concurrent documentation of classroom performance. In this approach teachers make instructional decisions based on information acquired in the teaching - learning process. Thus, although teachers will usually be able to identify in advance goals and objectives for working with specific children, the actual strategies for implementing these objectives may be radically altered once the teacher begins to interact with the child. As a result, most documentation of child performance must be accomplished retrospectively. Since teachers continually modify their teaching strategies with individual children, this approach makes quantitative analyses of children's classroom progress relatively insignificant. In contrast, retrospective documentation of children's classroom behavior serves a qualitative purpose of affording an outstanding insight into the actual teaching - learning process.

The goals and subgoals of the mainstreamed classroom program for handicapped and non-handicapped children at Eliot-Pearson overlap. The retrospective documentation of children's classroom activities clearly indicates this. The documentation format in use at Eliot-Pearson includes the following:

a. Goal: A general statement revealing assumptions concerning the expected outcomes of the program.

b. Subgoal: Statements written in general terms that relate to the overall goals.

c. Assessment: Baseline description data that enable the teacher to set specific outcome objectives.

d. Outcome Objectives: Specific behaviors or expected results which the program is to achieve. The achievement of these behaviors serves as the criterion for the success of the classroom experiences or activities.

e. Activities: Experiences that relate to some aspect of reaching the outcome objective.

f. Record-Keeping Procedures: A means of immediate feedback. Different objectives may call for totally different record-keeping formats.

g. Evaluation: Evidence that the child has/has not achieved the outcome objective.

h. Next Steps: Further planning closely related to evaluation.

Some examples of subgoals and outcome objectives follow (classroom activities will be discussed next). These examples illustrate how relatively complex and abstract concepts (e.g., ego development, competence, feelings of self-worth) can be translated into specific classroom objectives.

Insert Tables 1-3 Here

Table 1

GOAL	Personal/Social Development	
SUBGOAL	To increase positive interaction with peers.	To develop the ability to express one's feelings.
OUTCOME OBJECTIVES	1. To help the child acquire a friend by playing with other children in the classroom. 2. To help child feel comfortable in a group setting. 3. To assist child in developing role flexibility in relationships. 4. To help child learn to talk directly to another child, without using an adult or non-human (doll) intermediary. 5. To teach the child to display appropriate affect with peers. 6. To enable child to share people with whom he has relationships. 7. To help child with speech limitations to make a friend.	1. To learn to express anger verbally, eliminating inappropriate affect. 2. To encourage an impassive child to express verbally appropriate anger. 3. To encourage the verbal expression of feelings and concerns about sharing. 4. To enable a child to express feelings spontaneously. 5. To improve a child's vocabulary and repertoire of feeling-oriented experiences. 6. To encourage the use of specific materials as creative media, rather than objects of aggression.

Selected Outcome Objectives in Personal/Social Domain

Table 2

GOAL	Cognitive Development	
SUBGOAL	To increase exploration and mastery of a broad repertoire of curriculum experiences.	To improve pre-reading and early reading skills.
OUTCOME OBJECTIVES	1. To help child utilize fantasy play in order to deal with family/social interaction. 2. To engage child in active scientific investigation. 3. To involve child in sand activities for simple exploration and purposeful play. 4. To involve child in "messy" curriculum experience. 5. To involve child with areas and materials he usually avoids.	1. To acquire identity of "a reader." 2. To improve overall auditory discrimination. 3. To improve child's understanding and use of story sequence.

Selected Outcome Objectives in Cognitive/Developmental Domain

Table 3

GOAL	Motor Development	
SUBGOAL	To stimulate gross motor development.	To improve fine motor abilities.
OUTCOME OBJECTIVES	1. To foster mastery of gross motor skills by decreasing timidity and increasing involvement. 2. To teach child to jump from low step, remaining upright on both feet. 3. To teach child to hop, skip, and jump. 4. To develop a repertoire of productive outdoor activities. 5. To encourage body awareness and smoothness of movement through experience with creative movement.	1. To help child feel competence and comfort with fine motor tasks. 2. To teach child to held and use scissors. 3. To teach child who cannot stand unsupported how to use a hammer. 4. To help child successfully trace over letters in name. 5. To improve child's control for writing letters.

Selected Outcome Objectives in Motor Development Domain

In the following charts, these goals, subgoals, and outcome objectives are utilized in the case of specific children. It should be noted that the actual choice of instructional strategies will result from a variety of classroom features, e.g., the child's interests, teacher's interests, available materials, classroom spatial arrangements, other children present, etc.

INDIVIDUAL CHILD OBJECTIVES

Child's Name Jessica

Teacher's Name Ann

GOAL	PERSONAL/SOCIAL	COGNITIVE	MOTOR
SUBGOAL	To foster ego development that validates Jessica's true feelings and capabilities.	To improve math and pre-math skills and interest.	Develop fine motor skills
OUTCOME OBJECTIVES	1. Jessica will be able to express her feelings without teasing. 2. Jessica will be able to admit that she can't do something. 3. Jessica will ask for help from a child or adult. 4. Jessica will attend to the details of her work instead of doing it carelessly, just to get it done.	1. Jessica will spend more time with pre-math materials. 2. Jessica will understand concept of number representations. 3. Jessica will understand proportional and conservation relationships. 4. Jessica will understand concept of addition and be able to add 2 one digit numbers using objects as props.	1. Jessica will be able to cut accurately along a curved line. 2. Jessica will be able to steady her grasp of a writing tool to write more evenly. 3. Jessica will be able to sew two pieces of cloth together successfully.

INDIVIDUAL CHILD OBJECTIVES

Child's Name Jessica, page 2

Teacher's Name Ann

GOAL	PERSONAL/SOCIAL	COGNITIVE	MOTOR
SUBGOAL			Develop gross motor - expand gross motor repertoire.
OUTCOME OBJECTIVES	5. Jessica will accept affection & regard for her, as she is. 6. Jessica will communicate without nonsense phrases or slang. Related subgoal: To help Jessica deal with family expectations to be a young adult & a high achiever. 1. raise family consciousness about the problem.		4. Jessica will increase kinds of activities she explores outside: a. more climbing b. running c. learn to catch a ball 5. Jessica will show more expressiveness in her creative movement.

INDIVIDUAL CHILD OBJECTIVES

Child's Name Eddie

Teacher's Name Ann

GOAL	PERSONAL/SOCIAL	COGNITIVE	MOTOR
SUBGOAL	To foster ego identity as a leader rather than a follower.	To increase ability to attend in order to foster mastery of cognitive materials & skills.	To improve fine motor coordination
OUTCOME OBJECTIVES	1. Eddie will make choices independent of his friends. 2. Encourage Eddie's participation in leadership roles in dramatic play activities. 3. Eddie will show pride in his achievements and abilities.	1. Eddie will play a lotto game from beginning to end. 2. Eddie will complete a puzzle. 3. Eddie will do a drawing with attention to details. 4. Eddie will participate in more groups structured to teach a skill.	1. Eddie will be able to cut a straight line. 2. Eddie will be able to control a pencil and improve accuracy of drawing ability. 3. He will learn to use more complex carpentry tools - develop skills to build a multifaceted project.

INDIVIDUAL CHILD OBJECTIVES

Child's Name Chris

Teacher's Name Ann

GOAL	PERSONAL/SOCIAL	COGNITIVE	MOTOR
SUBGOAL	Chris will be able to accept his handicap without embarassment.	To develop language skills.	To improve skills that Chris' disability makes difficult for him.
OUTCOME OBJECTIVES	1. Chris will be able to talk about the feelings associated with being unable to do something physical - thus reducing the number of frustration responses. 2. Chris will react positively to his tutoring time. 3. Chris will be more aggressive in peer relationships & extend his relationships beyond "one best friend"	1. Chris will improve word finding skills. 2. Chris will be able to sing a whole song with comprehension. 3. Chris will speak slower and articulate more clearly.	1. Chris will grab something handed to his right hand with his right hand. 2. Chris will be able to run while carrying an object. 3. Chris will be able to skip & hop on one foot. 4. Chris will be able to jump from a 3 foot platform. 5. Chris will be able to grasp a crayon to write his name clearly.

INDIVIDUAL CHILD OBJECTIVES

Child's Name Stacey Teacher's Name Ann

GOAL	PERSONAL/SOCIAL	COGNITIVE	MOTOR
SUBGOAL	To increase feelings of competency and self-worth	To improve expressive language skills and foster appropriate use of grammar.	To develop gross motor agility and positive feelings about her body.
OUTCOME OBJECTIVES	1. Stacey will approach a task, for which she has the skills, with confidence-rather than ask an adult to do it for her. 2. Stacey will use dramatic play experiences to model an older child or adult, rather than be the baby. 3. Stacey will attempt to respond to questions asked of her in group time, rather than say "nothing"(this is also related	1. Stacey will respond verbally rather than non-verbally to questions. 2. Stacey will use appropriate pronouns. 3. Stacey will use appropriate verb forms. 4. Stacey will consistently use sentences longer than four words.	1. Stacey will no longer use physical illness to call attention to herself (although a personal-social goal, it relates to using her body more successfully) 2. Stacey will move expressively in a movement group. 3. Stacey will increase her repertoire of outdoor activities-run, ride bike, climb.

INDIVIDUAL CHILD OBJECTIVES

Child's Name Stacey, page 2 Teacher's Name Ann

GOAL	PERSONAL/SOCIAL	COGNITIVE	MOTOR
SUBGOAL		To improve receptive language comprehension	
OUTCOME OBJECTIVES	3.cont. to the acquisition of language skills.) 4. Stacey will stand up for herself when she is teased.	1. Stacey will follow instructions with more than one peer. 2. Stacey will understand the essence of a story told at group time. 3. Stacey will sing a whole song and understand all the words.	

INDIVIDUAL CHILD OBJECTIVES

Child's Name Jamie

Teacher's Name Ann

GOAL	PERSONAL/SOCIAL	COGNITIVE	MOTOR
SUBGOAL	To develop ego strength to experience leadership without always having to be the center of attention	To develop identity as a "reader".	Gross motor - To develop an identity as a competent "athlete"
OUTCOME OBJECTIVES	1. Jamie will be able to listen to others in a group without interrupting. 2. Jamie will not "explode" when something bothers him-will develop skills to deal with conflict. 3. Jamie will take leadership in sharing his wealth of knowledge. 4. Jamie will participate in more group projects (like plays) where	1. Jamie will sound out words phonetically. 2. To increase sight recognition by 25 words. 3. Jamie will be able to read a whole book. 4. Jamie will write more of his own stories. 5. Jamie will be able to phonetically spell words.	1. Jump rope 2. Bat a ball 3. Get basketball in a basket. 4. Ride a 2 wheeler. Fine Motor -- foster independence in areas of interest 1. Use a drill in carpentry 2. Use a sewing machine 3. Take his own medicine

INDIVIDUAL CHILD OBJECTIVES

Child's Name Jamie, page 2

Teacher's Name Ann

GOAL	PERSONAL/SOCIAL	COGNITIVE	MOTOR
SUBGOAL			
OUTCOME OBJECTIVES	4.cont. he is both a star and a support. 5. Jamie will follow through more aggressively on his desire to play with Matthew and Alexander.		

The complete documentation process can be seen in the following illustration. This example shows how the program planning procedures described in the previous section are put into practice. Although the activities described in this case can be implemented continuously throughout the classroom schedule, other examples could be presented that would be appropriate for only a specific part of the classroom experience.

Case Illustration: "Jay"

"Jay" is a five-and-one-half-year old boy whose primary handcapping condition has been diagnosed as cerebral palsy (assymetrical spastic quadriparesis). Jay is a highly active child who is currently taking medication to help control his activity level. He has a tendency to perseverate which inhibits his learning and he also has a minor speech impairment. Jay has been at Eliot-Pearson for two years, is extremely likeable and socially alert. He is an only child.

Teacher: Florence Longhorn

Goal: Personal/Social Develoment

Subgoal: To increase positive interactions with peers.

Assessment of Behavior: Jay has been having difficulty interacting with his peers.

1. Jay yells if children won't listen.
2. Pushes and shoves if ignored.
3. Starts to repeat what he has said, but gives up if children leave or ignore him.
4. Seeks friends by being overly friendly.
5. Takes on a disciplinary role with children to gain control.
6. Has a tantrum if friendship fails.
7. Holds on unreasonably if a friendship has started.
8. Refuses to be tutored if it means leaving a potential friend.

Outcome Objective:

1. Jay will make a friend.
2. Other children will realize his speech limitations and make allowances for this.
3. He will be more appropriate in his approach to friendships.

Approximate Time Period: Four weeks. Re-assess at the end of this time.

Activities:

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1. Teach Jay simple words to use when making friends, e.g., "Will you be my friend?" "I like you." "Please may I play with you?"

2. Read books to Jay about other children making friends, e.g., Will You Be My Friend? and New Boy at School.
3. Explain to other children that Jay has a hard time speaking, so they will have to listen extra hard to him.
4. Act as neutral referee in a dispute, interpreting for Jay how he is feeling and helping the other child understand what he is saying.
5. Set up nonthreatening situations where Jay is placed with another child and can start to relate to the other child, e.g., washing the paint pots, pushing another child on a swing, helping an injured child with a bandaid.
6. Have tutor arrange for Jay to invite another child to his tutorial sessions.
7. Pass along names of children who would make good friends for Jay so mother can arrange social visits outside of school.
8. Show and point out to Jay ways of making friends, e.g., by helping, by sharing, by listening.

Record Keeping Procedures:

1. Team meeting to report on incidents with Jay--their successes and failures.
2. Anecdotal records.
3. Meetings with tutor to set up tutoring with a friend.
4. Contacts with mother to keep her up to date on friendships.

Evaluation:

1. There is an improvement in Jay with respect to his peer relations, but this program needs to be repeated.
2. Tutoring went much better when he worked with another child.
3. Jay has started to realize his limitations and perhaps will soon learn to live and cope with them.

Next Steps:

1. Repeat program until Jay is confident in his ways of dealing with peers and friendships.

This example gives some indication of the type of classroom activities that are utilized to implement the outcome objectives. These activities are usually open-ended, non-deficit oriented, appropriate to a number of specific objectives, and relevant to the child's interests and abilities. The process of retrospective documentation, while limited in terms of its normative assessment value, is however, extremely valuable as a formative tool for teacher planning and for the establishment of future goals and objectives.

Tutorial Program Outcomes. In Section I, under Other Direct Service, the one-to-one Tutorial Program was described. Included among the individual summary charts for each child is a list of objectives and outcomes. These objectives are generally more specific and concrete than those utilized by the classroom teacher.

The charts indicate that a majority of the outcomes established for each child was achieved. These charts thus represent evidence of children's progress in the one-to-one tutorial program.

2. Quantitative Methodology

A second approach to evaluating the impact on individual children of the Eliot-Pearson program was utilized in 1977-78. This approach was two-pronged: it involved the collection of normative data by means of the McCarthy Scales of Children's Abilities and the acquisition of naturalistic data through use of a classroom observation format. These two instruments were designed to reflect the expected impacts or outcomes of the program.

The expected impacts are, first, that integrating handicapped and non-handicapped children in the same pre-school program will result in improved competencies in social-interactive behaviors as exhibited by the special needs children. This improved social competence should lead to increased acceptance of the handicapped children by their peers as represented by increasing frequency of spontaneous contacts among handicapped and non-handicapped children which are of longer duration and greater complexity, e.g., reflected in cooperative rather than isolated or parallel play patterns.

A second expected outcome of the program is that the Eliot-Pearson program will increase the inter-personal, intellectual and motor skills needed to maximize school success.

The observation format is designed to record competence in interpersonal relations. Teachers' retrospective reports, as well as documentation from tutors are utilized as a means for charting children's progress in intellectual, motor and personal/social areas. The McCarthy scales also contribute to this assessment by serving as summative validation of these records of children's progress. A description of the McCarthy Scales and the observation measure--their rationale, procedures and results--follow.

2.1 McCarthy Scales

The McCarthy Scales of Children's Abilities, MSCA (1972) is a test used to evaluate the level of cognitive functioning of young children ages 2-1/2 to 8-1/2. It it a standardized norm-referenced test which covers an age range unique to comparable cognitive tests for early childhood. Its primary purpose for this study is summative evaluation.

On the McCarthy Scales, scores are obtained from among eighteen subtests of mental and motor ability, which are subdivided into five scales. These include Verbal (V), Perceptual-Performance (PP), Quantitative (Q), Memory (Mem), and Motor (Mot). A sixth index, General Cognitive (GC), is a cumulative score derived from the verbal, perceptual-performance, and quantitative indices. A scale or standard score with a fixed mean of 50 and a standard deviation of 10 is converted from the raw score the child receives for each of the five indices. A similar conversion procedure is performed for the GC Index, but for this, there is a mean of 100 and a standard deviation of 16. All scale scores take the child's chronological age into consideration; thus, the resultant scores are a reflection of a level of functioning comparable to a sample of children the same age as the child being tested.

Reliability information for the McCarthy provides evidence to support internally consistent and stable scores for all scales and for all age levels considered on the standaridzation sample. Split-half and test-retest reliabilities were used contingent on their appropriate applicability for the individual subtests. Average coefficients ranging from .79 - .88 were obtained for the five subscales. The General Cognitive Index has an average coefficient of .93 indicating a high reliable estimate of a child's general level of functioning on this particular test. Validity information is limited, and a recent study by Kaufman and Kaufman (1977) suggests that further research on the relationship of the GCI to IQ is in order.

a) Rationale: The McCarthy Scales was used in a pre-post test assessment format to document the impact of the Eliot-Person program beyond what could be expected from developmental maturation alone. It was anticipated that the cognitive-developmental approach in curriculum and teacher involvement would effect a greater than expected change for the special needs population. A norm-referenced test provides a well-standardized and systematic presentation in the present case because of the difficulty of locating an adequate control sample for the targetted special needs population. The McCarthy Scales, in addition, was chosen for its age range of 2-1/2-8-1/2 years. Special needs children in a preschool population can be represented throughout the skill abilities afforded by the age levels of this test.

b) Subjects: The population was comprised of 18 children with special needs and 18 non-handicapped children controlled for sex, race, and school class. The control group reflects the obvious difficulty in this type of study, in matching children for handicapping condition and age.

Testing was scheduled for an October pretest and an April-May post-test. The examiner attempted to test the entire sample of 36 children of which only 31 children cooperated in receiving both administrations. Seventeen children in the non-handicapped group participated with one child refusal for both sessions. In the special needs groups fourteen children received both tests. A child refusal, a parent refusal, and two children who were blind and for whom this test was inappropriate accounted for the decreased sample size. Two of these four children were able to be tested in the spring but these results were not included in the present data outcomes. The final results presented in this section represent 14 special needs children (Group I) and 17 non-special needs children (Group II) who received the fall and spring tests.

c) Results: Results from the MSCA testing include comparisons of the major indices.

Mean chronological and mental ages are presented in Table 4 for both groups. The average chronological age for the October testing was 4 years 5-1/2 months with the special needs children approximately 9-1/2 months older than their counterparts. Group I ages ranged from 35 months to 81 months (mean=58.5) while Group II ranged from 38 months to 65 months (mean=49 months). The May testing yielded a mean age of 4 years 11-1/2 months across all children with the range of ages reflecting the 6-6-1/2 month time lapse between test administrations.

Gains in mental age are evident across testings for all children. Group I showed a group average increase of 4.4 months while Group II had a 10.00 month mean group gain over time. With an average of 6.3 months time between testings, the special needs children progressed at a 70% rate which is approximately 3/4 month for each month of the calendar year. The non-special needs group showed an average of 1.6 months growth for each school month. Thus, Group II progressed at about twice the rate of Group I.

Across all children, the mean gain in mental age was 7.48 months for the 6.3 month period of time, indicating a 1.2 month growth greater than anticipated from maturation alone, assuming the expectation of a month per month gain.

Insert Table 4 Here

A comparison of scale scores is presented in Table 5, showing means and standard deviations for the indices by separate group and by the whole group of children. The motor index mean does not include the two physically handicapped children in the special needs group.

Insert Table 5 Here

Table 6 delineates the descriptive classifications for all scale indices and the General Cognitive Index, referred to in Table 5.

Insert Table 6 Here

Table 4

Mean Chronological and Mental Ages

	ALL SUBJECTS (N=31)		SPECIAL NEEDS (N=14)		NON-SPECIAL NEEDS (N=17)	
	Pre	Post	Pre	Post	Pre	Post
Chronological Age						
Mean	53.38	59.64	58.6	65.1	49.1	55.1
S.D.	10.99	11.40	12.0	12.1	8.1	8.7
Mental Age						
Mean	49.70	57.19	43.7	48.1	54.6	64.6
S.D.	11.87	13.16	10.4	9.5	10.8	10.9

Table 5

Pre-test and Post-test Means and Standard Deviations for MSCA Indices

	ALL SUBJECTS (N=31)		SPECIAL NEEDS (N=14)		NON-SPECIAL NEEDS (N=17)	
Index	Pre	Post	Pre	Post	Pre	Post
Verbal						
Mean	48.35	52.29	37.57	38.92	57.23	63.29
S.D.	14.59	15.90	12.78	11.65	8.99	8.88
Percept. Perf.						
Mean	45.58	47.09	34.78	36.28	54.47	56.00
S.D.	13.56	14.71	10.29	12.48	8.53	9.63
Quant.						
Mean	47.19	46.42	38.92	35.64	54.00	55.29
S.D.	11.69	14.13	10.12	11.68	8.00	8.84
Gen. Cogn.						
Mean	94.22	97.80	75.00	75.50	110.05	116.17
S.D.	23.30	24.95	19.62	17.34	10.75	11.35
Memory						
Mean	44.48	48.29	35.93	35.71	51.52	58.64
S.D.	11.78	15.25	10.94	11.54	6.82	8.69
Motor	(n=29)		(n=12)			
Mean	43.58	42.17	33.00	31.75	51.05	49.53
S.D.	12.06	12.47	8.13	9.80	8.10	8.21

Table 6

MSCA Ability Levels*

Scale Index	Descriptive Classification	Corresponding GCI Range
69 and above	Very Superior	130 and above
63 - 68	Superior	120 - 129
57 - 62	Bright Normal	110 - 119
44 - 56	Average	90 - 109
38 - 43	Dull Normal	80 - 89
32 - 37	Borderline	70 - 79
31 and below	Deficient	69 and below

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*A. Kaufman & N. Kaufman, Clinical Evaluation of Young Children in the McCarthy Scales. New York: Grune & Stratton, 1977, p. 115.

Paired t-tests were performed on the means obtained by all the children, comparing pre- and post-testing as displayed in Table 7. Significance is shown on the Verbal and Memory Scales with a high degree of significance indicated on the General Cognitive Index. The Perceptual-Performance and Motor Scales show a general trend toward meaningful differential gain over time. Number ability was the only index that showed a high resistance to change.

Insert Table 7 Here

Figures 1-6 show the frequency distributions for pre- and post-test scores by MSCA index presented by group. All figures may be found in Appendix 4.

2.2 Classroom Observations

An observation instrument developed by High/Scope Educational Foundation (Ypsilanti, Michigan) was used to assess the emotional tone and the social-behavioral interactions of non-handicapped and handicapped children and their teachers. The system was specially designed (Ispa and Matz, 1978) for monitoring specific behaviors observable in integrated classrooms. This instrument was selected to be used at Eliot-Pearson because of the similarity between the project's educational philosophy and that of the High/Scope classroom where it was developed.

a) Format: The format of the system included frequencies of certain behaviors observed during a twelve minute observation period. The child was observed during free choice or outdoor activity time, either of which may have included a small group teacher-directed activity. Formal class group meetings were excluded from the data collection.

An occurrence of a behavior was recorded on a single code sheet containing a checklist of behavioral categories. A behavior was noted if it occurred once during the initial thirty section segment of each minute; the subsequent half minute was allocated to record the bebehaviors observed. The observer used a stopwatch to track the thirty second "observe" and "record" periods. A specific behavior was not marked more than once for any thirty second interval.

Except for "facial expression," each category denoted to whom the behavior was directed or from whom the behavior was received. These included any interactions between the target child and nonhandicapped classmate (NH), handicapped peer (H), and teacher (T). A single frequency was recorded for each interaction with these three groups for each 30 second observation unit.

Inter-observer reliability ratings were performed at random during each observation period of six weeks. The original trained

Table 7

Paired t-Tests Comparing MSCA Indexes Pre- and Post-test (N=31)

Scale Index	Mean Difference t_2-t_1	T Value	Probability
Verbal	-3.93	-2.31	.01*
Perceptual Performance	-1.51	-1.37	.09
Quantitative	.77	.67	.25
General Cognitive	-3.58	-2.49	.005*
Memory	-3.80	-2.37	.01*
Motor (n=29)	1.41	1.18	.12

observer and another observer collected all the observations. The trained observer joined the second observer for reliability checks for a total of thirty observations during each data collection period (Total N = 144 observations per period). Reliabilities ranged from .81 to .98 for all of the included behaviors.

b) Description of Behavioral Categories: The following is a list of the behavioral categories as defined by the High/Scope Foundation. Definition of the behaviors were followed as closely as possible by Project LINC staff. A few adjustments were made, however, and are noted by an asterisk. The High/Scope instrument originally included more categories; the modified form was used at Eliot-Pearson. A copy of the form that was used follows.

c) Categories:

FACIAL EXPRESSION: To be rated according to a 7-point scale: angry yelling, crying, with tears (1); whimpering, whining, no tears (2); downcast, frowning (3); neutral, sober (4); brightening, fleeting smile, and/or singing (5); broad smile (6); and laughing (7).

The rating to be recorded for each 30-second interval is to be indicative of the most intense affect observed. For example, if a child frowns and then cries in the course of the interval, a "1" is recorded. If expressions on opposite ends of the scale are observed during any 30-second interval, the average rating is recorded. Thus, if a child both smiles and whimperings during an interval, a "4" is recorded.

SOCIAL COMPLEXITY OF PLAY: Indicate whether the child is engaged in unoccupied behavior (u), in solitary (s), parallel (p), or cooperative (c) play or is engaged in an activity with a teacher (t). Play is to be categorized according to the following definitions.

Unoccupied: Child is not playing, but occupies himself with glancing around the room, watching other people, fidgeting with toys or with his own clothing or body, following a teacher around, hanging onto someone, etc.

*Solitary: Child plays alone and independently with toys that are different from those used by children who happen to be within speaking distance. Makes no effort to contact anyone.

*Parallel: Child is engaged in an activity similar to that of other children near him. There may be conversation either relevant or irrelevant to the activity, but no attempts to influence each other behavior. The child's principal concern is with the material, not with relating to other children.

ADAPTED HIGH SCOPE OBSERVATION

NAME ______________ DATE ____________ OBS. # ____________
CLASS ______________ ACTIVITY ____________

Special need present ____________ # teachers present ______________
Non-special need present ____________

TIME UNIT	1	2	3	4	5	5
FACE						
SOCIAL PLAY						
PLAYMATE						
CONVERSATION						
LEADS						
ORDERS						
FOLLOWS						
REFUSES						
OTHER REFUSES						
HURTS						
ABUSED						
HELP. gives						
asks						
receives						
AFFECTION. gives						
receives						
MATERIALS. asks						
gives/shows						
receives						
grabs						
grabbed from						
OBSERVES						
PRAISE. receives						
POS. ATTENTION						

NAME________________________________

TIME UNIT	7	8	9	10	11	12
FACE						
SOCIAL PLAY						
PLAYMATE						
CONVERSATION						
LEADS						
ORDERS						
FOLLOWS						
REFUSES						
OTHER REFUSES						
HURTS						
ABUSED						
HELP. gives						
asks						
receives						
AFFECTION. gives						
receives						
MATERIALS. asks						
gives/shows						
receives						
grabs						
grabbed from						
OBSERVES						
PRAISE. receives						
POS. ATTENTION						

*Cooperative: Child plays with other children; they may lend each other materials, make attempts to control who may or may not join in the play. All members are engaged in similar or identical activity. There may be division of labor. Each child does as he wishes while with other children or actually shares with other children.

With Teacher: A teacher is in the child's immediate vicinity, participating either in the child's activity or in the activity of the group in which the child is involved.

> This includes instances when the child is involved in Parallel or Cooperative Play and a teacher is right there, being a part of the group in any way. Teacher may be just observing or offering occasional comments. Mark this P/T or A/T for Social Play. This will indicate that the child is engaged in P or T play and a teacher is somehow involved.

*IF MORE THAN ONE TYPE OF PLAY OCCURS DURING THE 30-SECOND INTERVAL:

MARK THE PLAY THAT OCCURRED FOR THE LONGEST PERIOD OF TIME.

*Playmate: If the child is in any way joining or interacting with other children: mark H (handicapped) or NH (non-handicapped). If more than one child is involved, mark H or NH or NH/H depending on who comprises the group.

Conversing: Child is engaged in a conversation with another child or teacher. Both participants speak at least twice. Responses may be gestural, e.g., nodding the head for "Yes."

Leads: Child's orders or requests are obeyed and/or her example is followed. Includes all instances in which the child becomes a leader of sorts, whether T.C. so intended. For example, if another child sees T.C. talking on the telephone and picks up the receiver on a second telephone (but does not necessarily repeat verbatim what the target child is saying), "leads" is to be checked whether or not the target child had invited the second child to join her.

Anytime the child makes an order or request that is heeded, even one so simple as "Look!" check "leads." When any form of chasing or tag is observed, "leads" is to be marked if the target child initiated the activity, whether she is the "chaser" or the "chased" unless the purpose of the chasing is to gain (or retrieve) an object which the "chased" has. In such cases, "refuses" and/or "other refuses" is to be marked. The category does not include instances when the child is being helped without her having asked to be helped. If, however, she asks to be helped, and her request is heeded, then "leads" is to be checked as well as "asks help" and "receives help."

Orders: Child consciously tries to initiate and/or structure another person's activity. Includes statements such as "You be the baby," "Put that here." "Orders" is to be checked when the child's apparent object is to have things his way, to command. The category is not mutually exclusive with "leads" and both may apply to a given behavior. The difference is in the fact that "orders" looks at the intention of the target child, "leads" at the reactions of those around him. If child does what T.C. "orders," mark "leads."

Follows: Behaviors to be included under this category are the direct opposite of those under "leads." Here, the child is complying with the command of another or following the example of another whether or not she has been asked to do so.

Refuses: Child does not comply with another person's explicit order, request, or suggestion or child tries to stop another person from participating in some activity (e.g. "Go away. You can't play with us.") In such cases, check "refuses" and "orders." Check "refuses" even if the refusal is only temporary.

Other refuses: Behaviors included here come not from the child being observed, but from others who have not complied with an explicit request or command he has made. The wishes of the target child must be clearly expressed, but the other's non-compliance may be either verbal or simply seeming not to pay attention.

Hurts: Child attempts to physically or verbally hurt another. Examples include hitting, name calling, etc. Does not include accidents, non-compliance which is not overtly aggressive, or grabbing away materials. ("Go away" is not included in this category.)

Abused: Child is the object of verbal or physical aggression. Does not include accidents or having materials grabbed away.

Gives help: Child asks for assistance, e.g., "Make me a house," "Help me carry this," "Show me how." May include statements like "I can't do this" if the intent is clearly to get assistance. Does not include pointing out a problem or wish if no aid is solicited.

Receives help: Child is given help, as defined under "gives help." Includes receiving tips on social strategies, as when a teacher says, "Try asking him for it. Maybe he'll give it to you." If the child is being helped after having asked for helped, check "leads" also.

Gives affection: Child shows physical and/or verbal affection, e.g., hugs, holds hands, comforts, says "I like you," etc.

Receives affection: Child is the recipient of behaviors such as those listed under "gives affection."

Asks for materials: Child asks for materials. Includes statements such as "I need the red one," "Give me the tractor." Depending on tone of request, can be marked "leads" or "orders."

Gives/shows: Child gives or shows an object to another person. May be checked in conjunction with "orders," "calls positive attention," or "gives help."

Receives materials: Child takes materials that have been offered by another person. This does not include grabbing, or cases in which a child takes an object not for his own use, but only to follow through on an order.

Grabs: Child attempts (successfully or unsuccessfully) to aggressively take an object out of the hands of a person who has not offered it.

Grabbed from: Someone attempts to aggressively take an object out of the child's hands.

Observes: Child watches someone for at least three consecutive seconds.

Receives praise: Child is complimented by another person. Product or object oriented. If statement can be translated into "nice job", use "praise."

Calls positive attention: Child comments positively on own activity, accomplishment, appearance, ability, possession, shows work to teacher (when she or he has not asked to see it), etc. Includes statements such as "Look what I made!" etc. May also include comparative statements such as "My tower is bigger than his!"

d) Subjects and Procedures: Thirty-six children were selected from the five Eliot-Pearson classrooms to be included in the naturalistic observations. All eighteen children designated as special needs participated in the study (Group I). Handicaps represented included delayed development, visually-impaired, language difficulty, medically and physically handicapped, and learning and behavior problem children. With such a representation of special needs, it was impossible to match or randomly select a control population. Thus, the resultant second grouping of children (n=18, Group II) were controlled for sex, race, classroom, and social class whenever possible. Limitations of the non-traditional control group are recognized.

The observational data collection occurred coincidently with the McCarthy evaluations during a six week period in October-November (fall) and again for six weeks in April-May (spring). Each child was observed for four twelve-minute units of time for each data session. The children were listed alphabetically and observed accordingly with the observers alternating observations for each child when possible. All children received a total of eight observations for the school year. One child moved out-of-state in March and was observed for his Spring data before his departure.

The observers entered the classrooms with clipboards and stopwatches and remained within visual and aural proximity of the observed child. After initial curiosity from the children, the observers remained as unobtrusive as possible in the classrooms.

e) Results: Means were calculated for the four fall and four spring observations resulting in two scores per child per variable. Mean frequencies and t-tests were then performed to compare the number of interactions between the two groups of children and their peers and teachers. Peers were further subdivided into handicapped and non-handicapped children for the variables "Conversation" through "Receives Praise." For these variables, it was necessary to convert the actual observed frequency of behavior between the target child and respective peer group to an expected frequency. That is, the expected number of interactions was based on the number of handicapped and non-handicapped children present that day in class. More specifically, the expected score was determined by dividing the number of handicapped (or nonhandicapped) children present by the total number of children present and multiplying this fraction by the observed frequency for that observation. T-tests and frequencies were also performed on these converted frequencies.

Sixteen of the original twenty-four variables were included in the data analysis; others were omitted due to the minimal presence of these behaviors for either group of children during the observation periods. Examples of variables not particularly sensitive as defined by High/Scope and used in the Eliot-Pearson setting include "positive attention," "hurts," "abused," and "grabs materials."

Emotional Tone

Minimal differentiation was noted across all children between observation periods on general affective tone as indicated by facial expression. All means for either group for fall or spring or for all children across observations ranged from 4.42 - 4.57 showing a tendency toward a "neutral" to "bright" expression throughout the year for all children regardless of group.

Level of Social Play

The children showed a significant decrease in unoccupied and solitary play with a concomitant increase in cooperative play between fall and spring; parallel activities remained the same.

Insert Table 8 Here

In particular, the handicapped children showed a significantly higher mean frequency in October for unoccupied behavior than their counterparts with more equivalent means in May. The control group's means showed little change.

Solitary behavior indicated similar results. Total time spent in solitary activity significantly decreased, in particular, for the handicapped children; yet their average "means" are somewhat higher than the non-handicapped group across both observation periods. It is important to note that not only were the special needs children spending less time in solitary activity in the spring, but they were also engaged in significantly less time with the teacher during solitary play, $\underline{t}(17) = 2.22$, $p < .04$.

Total parallel behavior showed equivalent mean frequencies across all children for the entire year. Without a teacher nearby, parallel activity approached significance between the two groups during the Spring, $\underline{t}\ (34) = 1.70$, $p. <\ 09$.

A significant difference was observed in cooperative activity for all children, $\underline{t}(35) = 2.12$, $p < .04$, with a tendency towards more teacher involvement in this level of play over time, $\underline{t}(35) = -1.88$, $p. < .06$. It was the teacher proximity in particular that contributed to the signifiance; otherwise, the mean frequencies were very similar.

Due to low frequencies, comparisons on the remaining behavioral categories yielded very few significant differences on interactions with teachers, peers, and separate groups of children.

Child-Teacher Interactions

The only interactions involving teachers that revealed significance showed the handicapped children receiving more help from the teachers and receiving more materials from the teachers during both the fall and spring than the non-handicapped group. The earlier observation period also indicated that the special needs group refused and followed the teacher at a significant level. In addition, there was a tendency for children in Group I (special needs) to converse more with their teachers during the spring than their counterparts. See Table 9 for

Table 8

Paired T-Tests Comparing Levels of Play Time 1 - Time 2

(n= 36)

Level of Play	Mean Difference	T-Value	Probability
Unoccupied			
No teacher	.44	2.50	.01
Teacher	.03	.17	.86
Total	.48	1.74	.09
Solitary			
No teacher	.12	.65	.52
Teacher	.44	2.19	.03
Total	.58	2.17	.03
Parallel			
No teacher	-.22	-.87	.39
Teacher	.08	.19	.85
Total	-.01	-.03	.97
Cooperative			
No teacher	-.40	-1.19	.24
Teacher	-.55	-1.88	.06
Total	-.96	-2.12	.04

frequency means, standard deviations, and t-test comparisons.

Insert Table 9 Here

Within group, both the control children and their special needs peers led the teacher significantly more during the spring, $\underline{t}(17) = -3.20$, $p < .005$ and $\underline{t}(17) = -3.39$, $p < .004$, respectively. While the non-handicapped children ordered their teachers significantly less over time, $\underline{t} = 3.05$, $p < .007$, their handicapped peers tended in the same direction. Equivalent frequency means were evident over time for the variable "ask teacher for help" for Group I yet this group received significantly less help from the teachers in the spring, $\underline{t}(17) = 3.01$, $p < .008$. Support for this finding suggests that the teachers were encouraging more independence in the children by the end of the school year.

Child-Peer Interactions

Differential mean frequencies were evident in the fall on only two variables: the non-handicapped children asked for materials significantly more often from peers and were refused more frequently by peers than their handicapped classmates. By the end of the year, the control children conversed with peers, led peers, gave materials to peers, and observed peers at a higher rate than their counterparts. Frequencies and significance levels are shown in Table 10.

Insert Table 10 Here

Calculations were performed on frequency of interaction with only handicapped children during both observation periods resulting in insignificant mean frequencies. There were differences in interactions between groups with non-handicapped children, however. (See Table 11.)

Insert Table 11 Here

Throughout the year, special needs children consistently led, followed, and refused their non-handicapped classmates significantly more than did the control group. In the fall, the non-handicapped peers more frequently than the handicapped population requested materials from other control children while the special needs children tended to converse more with Group II children than did the non-handicapped group. Level of conversation did reach significance at the end of the year. The mean frequency for control children observing their non-handicapped classmates

Table 9

Fall Mean Frequencies of Child-Teacher Interactions with T-Tests by Group

Variable	Non-Handicapped Children		Handicapped Children		$p < .05$
	Mean	S.D.	Mean	S.D.	
Conversation	1.25	.89	1.50	.85	
Leads	.50	.53	.70	.47	
Orders	.36	.50	.39	.69	
Follows	1.07	.59	2.04	.86	.000
Refuses	.41	.40	1.12	.81	.003
Other Refuses	.30	.31	.30	.35	
Gives Help	.12	.31	.26	.33	
Asks Help	.69	.53	.51	.42	
Receives Help	1.69	.85	2.90	1.21	.002
Asks Materials	.29	.32	.34	.30	
Gives Materials	.58	.41	.62	.59	
Receives Materials	.40	.41	.84	.58	.01
Observes	1.12	.70	.90	.77	
Receives Praise	.50	.32	.48	.35	

Spring Mean Frequencies of Child-Teacher Interactions with T-Tests by Group

Variable	Non-Handicapped Children		Handicapped Children		$p < .05$
	Mean	S.D.	Mean	S.D.	
Conversation	.75	.82	1.29	.86	.06
Leads	1.19	.94	1.65	1.01	
Orders	.05	.18	.08	.17	
Follows	1.50	1.26	2.08	.89	
Refuses	.46	.37	.80	.77	
Other Refuses	--	--	--	--	
Gives Help	.05	.13	.11	.17	
Asks Help	.43	.45	.53	.56	
Receives Help	1.11	.96	1.95	.94	.01
Asks Materials	.13	.19	.20	.19	
Gives Materials	.34	.36	.34	.32	
Receives Materials	.30	.35	.62	.48	.03
Observes	1.30	.86	.84	.90	
Receives Praise	.33	.46	.62	.55	

Table 10

Fall Mean Frequencies of Child-Peer Interaction with T-Tests by Group

Variable	Non-Handicapped Children		Handicapped Children		p. < 05
	Mean	S.D.	Mean	S.D.	
Conversation	4.97	4.57	3.76	5.33	
Leads	6.16	4.94	3.54	4.75	
Orders	2.37	3.41	2.00	3.71	
Follows	5.36	5.12	4.40	4.73	
Refuses	.68	.69	.68	.61	
Other Refuses	1.18	.68	.75	.60	.05
Gives Help	.33	.32	.30	.70	
Asks Help	.07	.11	.05	.13	
Receives Help	.19	.23	.16	.25	
Asks Materials	.34	.36	.08	.14	.01
Gives Materials	.81	.75	.47	.43	
Receives Materials	.50	.58	.30	.45	
Observes	2.77	1.42	2.36	1.30	
Receives Praise	.32	1.23	.03	.08	

Spring Mean Frequencies of Child-Peer Interactions with T-Tests by Group

Variable	Non-Handicapped Children		Handicapped Children		p.< 05
	Mean	S.D.	Mean	S.D.	
Conversation	1.29	.83	.68	.71	.025
Leads	2.47	1.32	1.29	.94	.004
Orders	.42	.60	.19	.30	
Follows	1.75	1.01	1.45	1.11	
Refuses	.98	.64	1.0	.62	
Other Refuses	1.08	.67	1.22	.68	
Gives Help	.33	.27	.29	.51	
Asks Help	.09	.17	.08	.12	
Receives Help	.19	.25	.19	.22	
Asks Materials	.15	.23	.18	.22	
Gives Materials	.48	.35	.23	.30	.03
Receives Materials	.27	.38	.25	.24	
Observes	3.0	1.4	1.9	1.5	.04
Receives Praise	.04	.17	.01	.06	

Table 11

Fall Mean Frequencies of Child-Non-Handicapped Peer Interactions with T-Tests by Group

Variable	Non-Handicapped Children		Handicapped Children		p. < 05
	Mean	S.D.	Mean	S.D.	
Conversation	.03	.08	.14	.22	.06
Leads	.05	.12	.22	.27	.02
Orders	.02	.06	.05	.09	
Follows	.04	.10	.18	.22	.02
Refuses	.02	.03	.16	.17	.003
Other Refuses	.04	.08	.11	.13	.06
Gives Help	.21	.21	.22	.61	
Asks Help	.03	.08	.05	.11	
Receives Help	.10	.17	.12	.19	.01
Asks Materials	.23	.25	.07	.12	
Gives Materials	.42	.41	.33	.39	
Receives Materials	.33	.42	.20	.35	
Observes	1.72	.70	1.50	.88	
Receives Praise	.06	.21	.01	.04	

Spring Mean Frequencies of Child-Non-Handicapped Peer Interactions with T-Tests by Group

Variable	Non-Handicapped Children		Handicapped Children		p. < 05
	Mean	S.D.	Mean	S.D.	
Conversation	.02	.04	.07	.07	.029
Leads	.04	.05	.13	.10	.003
Orders	.004	.01	.03	.03	.06
Follows	.04	.05	.17	.13	.002
Refuses	.02	.03	.09	.07	.001
Other Refuses	.02	.03	.13	.08	.000
Gives Help	.13	.17	.13	.24	
Asks Help	.08	.14	.06	.09	
Receives Help	.14	.20	.11	.17	
Asks Materials	.10	.14	.12	.17	
Gives Materials	.30	.25	.18	.24	
Receives Materials	.20	.26	.17	.17	
Observes	1.74	.79	1.17	.90	.05
Receives Praise	.03	.13	.01	.05	

was significantly higher than with the handicapped children in the spring.

f) Discussion: Very little meaningful information can be derived from the observations performed this year due to the extremely low occurrence of almost all of the variables. There is congruence on this point in viewing the High Scope data (Program Performance Report, August, 1976, High/Scope Demonstration Preschool Project), in which their means are also low in frequency. It is thought that the selected behavioral categories are not sensitive or appropriate to the needs of an open education classroom. The variables, as used, are isolated entities and do not necessarily reflect an interaction pattern. The time sampling procedure may also have been a contributing factor to such low observed behaviors; the interrupted method of observing and recording would seemingly interfere with the breadth of the initial behavioral interaction, and pattern of behavior.

Nevertheless, the findings indicated an evenness of affect for all children throughout the year. They also show a significant increase in cooperative play. This would seem to indicate the existence of a well-integrated classroom with children able to interact in a social capacity with one another and where handicapped children look no different than their non-handicapped peers.

The handicapped children received more help and more materials all year from the teachers. It is not known whether this was child-initiated or teacher-initiated. Teachers were in proximity more often during cooperative play in the spring. It is suggested that, within this particular context, that the special needs children were in need of this assistance in helping to maintain a cooperative endeavor. Also, in the spring, the handicapped group conversed more with their teachers than their peers. This, too, may have been a teacher facilitation during cooperative activity. It may just have been that the teachers were nearby more often and thus there was more of an opportunity to converse.

The finding that the special needs population led their non-handicapped classmates more often suggests an active involvement on the part of the control children in participating in the handicapped children's endeavors. In contrast, Group I also followed Group II more often, suggesting a reciprocal relationship between the two groups of children.

Despite the difficulty in drawing conclusions from the insufficient data, it seems well documented that the social level of play followed a coincident path for both groups of children over the year, suggesting a socially well-integrated classroom situation. Unfortunately, how much teachers or peers were involved in the process of integration cannot be stated due to the limitations of the data.

3. The Mixed Multiple Measure Approach.

In the following article a descriptive single case methodology is described and applied in the demonstration program at Eliot-Pearson. Although the article provides a broad context concerning the program's theoretical position and concerning program impact studies in general, it is based on the data already presented in this section. As such it should be considered an integration of the project's assessment efforts, as well as a proposal for future evaluation studies of developmentally oriented, mainstreamed open classroom projects.

Assessing the Effectiveness of Open Classrooms On Children With Special Needs

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ASSESSING THE EFFECTIVENESS OF OPEN CLASSROOMS ON CHILDREN WITH SPECIAL NEEDS

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I. Introduction

Open classrooms are educational settings based on a highly differentiated or individualized level of interaction between teachers and children. Although popular accounts paint a permissive picture of open classrooms, open education should not be associated with a maturationist or laissez-faire view of education in which the teacher is a passive facilitator of information and the child controls the learning experience. Nor should open education be identified with a view that holds that the teacher or the curriculum should determine what the child must learn *a priori*. Rather, in open classrooms, teachers and children are joint contributors to decisions regarding the process and content of learning (Bussis and Chittenden, 1970; Bussis, Chittenden and Amarel, 1976). This approach does not entail an explicit agreement between teacher and child on every issue of classroom control and decision-making. However, it does assume that the teacher's decisions regarding pacing, sequence, materials and setting will be largely informed by the information generated by the child in the classroom environment.

The effort to create an environment that is interactive on several levels poses problems for the teacher in planning classroom activities, establishing individualized goals and objectives and creating developmentally appropriate curriculum. In certain respects, the educational program for each child in an open classroom is unique. This factor compounds the problems of evaluation in open education and poses a dilemma. That is, since open classrooms are so highly individualized, it may not be possible to subject them to standard program evaluation efforts; yet, without evaluation, the essential interactive character of the open classroom is put in jeopardy and its generalizability is seriously limited.

In this chapter we will explore the issues that surround the evaluation of the effectiveness of open educational programs for young children. In particular, we will focus on developmentally-oriented open classroom programs that enroll young children with special needs. Such programs present methodological challenges that cannot be met by standard evaluation paradigms. Our purpose is to introduce an alternative approach and to describe its implementation in a mainstreamed open educational program consistent wtih developmental principles.

II. Open Education as a Developmentally Appropriate Setting for Children with Special Needs.

The relevance of open education to children with special needs has been discussed in other publications (Meisels, 1976, 1978). In general, the essential variables of an open classroom have been described in these writings as consisting of: 1) a classroom environment prepared in accordance with certain specialized conditions; 2) extensive opportunities for child initiation and activity in the classroom; and 3) teacher activity and intervention of an interactive type. These three major variables will be discussed briefly.

Environment

The open classroom is an "information-rich" environment. That is, it is an environment intended to transmit and generate information to children and adults. The classroom is usually set up as a workshop, dominated by interest areas. These areas include centers for reading, writing, math, science, art work, blocks, water play and dramatic play. Often the interest areas accommodate more temporary pursuits, such as a science museum, an incubator, a circus project, cooking or even a print shop. Unlike the traditional classroom, desks and chairs do not occupy most of the space. In the open classroom, desks are replaced with unassigned, small tables that can be moved to locations where they are needed. There is, in fact, no formal locus of learning in the classroom; learning takes place wherever something of particular interest to a child happens to be and/or where a systematic interaction between teacher and child can be implemented. Thus, such classrooms rely on a wide variety of materials accessible to teachers and children and an environment and educational program that encourages children to explore the wealth of available options, but to do so in a way that transmits information to them and to the adults working with them.

Children's Interests and Initiative

Open classrooms provide children with numerous opportunities to engage their curiosity, and to utilize their initiative in the process of learning. This exercise of children's interests and initiative is also basically an information-generating and information-transmitting activity. As such, it is an essential aspect of the teaching process in open classrooms. The potential for discovery is present at all times for children in open classrooms. Yet, such discoveries are not necessarily random, nor are they restricted to the subjective experience of individual children. In the act of discovery one can recognize what might be termed "unaided" or unmediated discoveries, such as when a child learns about the properties of magnets, the working of an equal-arm balance, or the mixing of colors. Other unaided discoveries could include the teacher finding out who can read, how the classroom can be rearranged to create a certain feeling in one part of the room, or what conceptual problem is standing in the way of a child's learning to add. "Aided" or mediated discoveries also abound: one child being taught by the teacher how to read the word"home," and then making generalizations about other words with "silent e's;" or the teacher discovering a new use for a classroom material after watching children play with it, and then talking about it with them.

Thus, for the teacher, the provision of freedom of choice means that (s)he must carefully examine the choices made by the child as well as the way in which the child chooses. This is the only way the teacher can acquire the information (s)he needs to direct his/her own behavior. If the environment is not sufficiently ambiguous or does not contain a wide enough variety of choices, the children will not be able to make choices, and the teacher will have insufficient information. As Hawkins (1974) points out, lacking information, the teacher will not be a very good diagnostician of what the children need. Not being a good diagnostician, (s)he will be a poor teacher. (S)he will be a poor teacher because (s)he will not have adequate basis for making his or her choices: choices of goals, materials, timing, strategy, and attitude.

Teacher-Child Interactions

In open classrooms that are developmentally-oriented, teachers actively intervene in children's learning. Such intervention can be considered interactive with the child's needs and abilities to the extent that it relies on and makes use of information acquired previously by the teacher. This information forms the framework for the teacher's contribution to the child's activity. Among the data the teacher tries to collect and use are observations about children's style of conceptualization, their ability and way of making choices, their peer associations, their family history, their cognitive skills and knowledge, their self-perception, their attitude toward achievement, their dependence on authorities, their curiosity, creativity, attitudes, feelings and moods. Some of this information is acquired through direct interviewing and questioning; most of it, however, is obtained from careful observation of the way the child questions and interacts with the classroom environment and its inhabitants.

Developmentally-Oriented Classrooms. Thus, open education is an approach which is based on information acquired by the teacher from the child's interactions with the physical environment, the environment determined by other children and the environment created by relationships with adults. Educational decision-making, in consequence, is highly deliberate, although highly differentiated. Such an approach is consistent with a cognitive-developmental view of education (see Kohlberg, 1968, 1972;

Kohlberg and Mayer, 1972; Kamii and DeVries, 1977). As stated by Kamii and Derman (1971), the cognitive-developmental view considers teaching to be

> a method that helps the child make his own discoveries by asking the right question at the right time. The "right" question is in precise harmony with what the child is thinking about at the moment. The "right" timing allows him enough time to integrate and consolidate a new discovery before the next question is introduced (p. 145).

No teacher can be "right" all the time with all of the children (s)he is working with. However, the developmentally-oriented teacher is seeking to bring about the acquisition of irreversible structures in children, rather than immediate and short-term gains. Such lasting change is dependent on a highly individualized program that focuses on the specific needs of individual children and that is informed by a sound theory of growth and development.

Open Education and Special Education. It is in this perspective that developmentally-oriented open classrooms must be viewed when considering their relevance for children with special needs. In the past, most handicapped children were enrolled in educational programs that did not focus on their individuality and their interactive relationships with animate and inanimate environments (see Johnson, 1962). In the open classroom, however, handicapped children are exposed to a setting that fosters and encourages interactivity. Children are encouraged to manipulate objects directly, to try new experiences and to reorganize old ones. They are permitted opportunities to engage in a variety of relationships with their peers and to engage in a learning process that is directed but not wholly determined by their teacher. Activities and experiences in such classrooms are multiple rather than binary, that is, right or wrong. Learning is immediate and direct, rather than mediated through rules and rote explanations. Moreover, where the process and the content of learning are critical features of the educational approach, as is true of open classrooms, progress is defined in individual terms rather than through some specification of a common terminus or objective to be achieved by each and every child.

The Eliot-Pearson Children's School. This approach to working with handicapped children has been implemented in several programs described in this book. In this chapter illustrations concerning the impact of open classrooms on children with special needs will be drawn from yet another program, the Eliot-Pearson Children's School at Tufts University.

Eliot-Pearson is an integrated, or mainstreamed, preschool and kindergarten. Approximately twenty percent of the 90 children aged three to six enrolled in the school are children with mild or moderate handicaps. A wide variety of handicapping conditions is represented in the school population. The program at Eliot-Pearson has been described elsewhere (Meisels, 1978) but will be further clarified in later sections of this chapter. Principally, it is a program that stresses activity, experience and a systematically adaptive role for the child vis à vis his/her environment, peers and teachers.

Educational programs that follow such principles bear some striking similarities to each other: similarities in terms of congruence of objectives, implementational strategies, motivational rewards and fundamental theory of growth and learning. Such an approach supports activities with multiple objectives and is thus highly appropriate for children who require a variety of specialized learning experiences and opportunities for expression. Nevertheless, such an approach is exceedingly difficult to subject to standard types of evaluation design.

III. Problems in Utilizing Traditional Evaluation Strategies to Evaluate the Impact of Open Classrooms

The treatment-control group paradigm dominates the practice of program impact evaluation. This approach is based on statistical principles of experimental design. Typically, one or more experimental or program groups is compared with a control group or with pre-existing information on a control condition. Average outcome differences across the groups are considered by adherents of this model to be an appropriate summary measure of program impact. This basic strategy is utilized whether one is investigating a single outcome (e.g., ability to read at a specified level), or an extensive array of developmental variables. In the latter case, one would simply examine a series of mean differences across groups for the set of outcome variables.

In recent years numerous ethical, social, political, and logistical problems have been encountered in the many applications of this basic approach (see Bryk, 1978; Riecken and Boruch, 1974). These problems are further exacerbated by the highly individualized nature of programming required in order to be responsive to the special needs of the handicapped child enrolled in a developmentally-oriented open classroom.

In the open classroom, the actual sequence of classroom activities and experiences cannot be defined a priori. Rather, the educational experience for a particular child can only be specified in the dynamic interaction of the program with the child. Nevertheless, this does not entail that such program activities must by definition be idiosyncratic. Every teacher operates within a general framework from which individualized educational programs are derived. That is, in every open classroom there exists a set of implicit or explicit program objectives. However, the open classroom teacher has no expectation of implementing all of these objectives with every child nor of implementing them at the same rate or in the same way. This is particularly true of children with special needs, all of whom present such different needs and abilities that no single curricular sequence and structure could be appropriate.

For example, the program at Eliot-Pearson is drawn from a broad set of developmental objectives that fall within four major domains: Personal/Social, Gross Motor, Fine/Perceptual motor and Cognitive/Language. Table 1 lists specific objectives within each of these domains.

Insert Table 1 Here

Taken as a whole, these objectives represent the "macro-structure" of the Eliot-Pearson program. Different subsets are drawn from these objectives to meet the needs of individual children. The individual differences between children also determine the type of implementational strategies

TABLE 1

PROGRAM OBJECTIVES

Eliot-Pearson Children's School

PERSONAL/SOCIAL

1. To develop the ability to express one's feelings.
2. To accomplish successful separation.
3. To develop a sense of independence and self-confidence.
4. To increase impulse-control and ability to accept limits.
5. To increase the level of attention and involvement in activities.
6. To improve the ability to make transitions, follow classroom routine, and make self-regulated choices.
7. To develop the ability to feed oneself.
8. To develop the ability to be generally independent in toileting.
9. To develop a positive self-image.
10. To develop trust relationships with teachers.
11. To increase the ability to make a friend.
12. To increase positive interactions with peers.
13. To acquire skills of group participation.

GROSS MOTOR

1. To develop the ability to hop, skip, balance and climb stairs.
2. To improve body awareness.
3. To develop the ability to throw and catch a ball.
4. To increase coordination and agility.

TABLE 1

PROGRAM OBJECTIVES (continued)

Eliot-Pearson Children's School

FINE/PERCEPTUAL MOTOR

1. To develop the ability to cut with scissors and to use drawing implements.
2. To improve skill in writing and printing activities.
3. To develop the ability to discriminate among shapes and figures.
4. To increase the ability to work with manipulative materials, e.g. puzzles.
5. To develop the ability to button, zip, tie and dress oneself.

COGNITIVE/LANGUAGE

1. To increase exploration and mastery of a broad repertoire of curriculum experiences.
2. To increase the ability to differentiate between reality and fantasy.
3. To acquire readiness information, e.g. colors, street names, etc.
4. To develop the ability to match, classify and seriate.
5. To improve pre-reading and early reading skills (letter names).
6. To develop the ability to understand number and to perform simple addition tasks.
7. To develop the ability to understand and follow directions.
8. To acquire auditory memory skills.
9. To stimulate expressive language usage.
10. To improve clarity of speech (articulation, pronunciation).
11. To develop the ability to name common objects correctly.
12. To learn to use pronouns and prepositions correctly.
13. To develop proper syntax and sentence construction.

utilized for each objective. The following two cases briefly illustrate how such a common set of program objectives can be utilized to meet the needs of children with very different abilities and problems.

Case 1: Becky

Becky is a five year ten month old child enrolled in an Eliot-Pearson classroom with seventeen other children, aged four and five. When she entered the program she displayed bizarre expressive language, inappropriate social behavior, and an unusual sensitivity to distractions and irrelevant details in her environment. In addition, Becky was lacking in confidence in her gross-motor activities and showed poor fine-motor coordination when manipulating objects and when drawing. In general, Becky tended to perseverate and to become absorbed in a fantasy world unless directed and focused by her teacher. Becky also required constant encouragement to continue to develop cognitive skills.

A subset of objectives from the set of general program objectives was selected for emphasis with Becky. The individual objectives are shown in Table 2.

Insert Table 2 Here

Case 2: Jonathan

Jonathan is a four year, nine month old boy, enrolled in an Eliot-Pearson classroom with eighteen children, aged four and five.

TABLE 2. Case 1: Becky - Objectives

PERSONAL/SOCIAL	GROSS MOTOR	FINE/PERCEPTUAL MOTOR	COGNITIVE/LANGUAGE
*1. To develop the ability to express one's feelings.	*1. To develop the ability to hop, skip, balance, and climb stairs.	*1. To develop the ability to cut with scissors, and use writing and drawing implements.	*1. To increase exploration and mastery of a broad repertoire of curriculum experiences.
2. To accomplish successful separation.	2. To improve body awareness.	2. To improve writing/printing abilities.	2. To increase the ability to differentiate between fantasy and reality.
3. To develop a sense of independence and self-confidence.	4. To increase coordination and agility.	4. To increase the ability to work with manipulative materials.	3. To acquire readiness information.
4. To increase impulse-control and ability to accept limits.			7. To develop the ability to understand and follow directions.
5. To increase the level of attention and involvement in activities.			8. To acquire auditory memory skills.
6. To improve the ability to make transitions, follow classroom routines, and make self-regulated choices.			9. To stimulate expressive language.
9. To develop a positive self-image.			
10. To develop trust relationships with teachers.			
11. To increase the ability to make a friend.			
12. To increase positive interactions with peers.			
13. To acquire skills of group participation.			

* These numbers correspond to the Program Objectives listed in Table 1.

Jonathan is physically unable to walk. When he started school, he was learning to use a walker to maneuver himself about the classroom.

Jonathan is a slef-assured, even-tempered child who easily engages himself in play with other children. Initially he needed assistance in moving his body to a seated position in a chair. Gross motor activities constituted an area of heavy emphasis throughout the year.

Jonathan's fine motor and manipulative skills were age appropriate but he needed encouragement to engage in printing and drawing activities. Jonathan also required assistance in the acquisition of cognitive skills. He did not know the names of shapes or how to count beyond the number three. He was unable to perform one-to-one matching tasks or to differentiate between the smallest and largest object in a group. In the area of language, he had difficulty naming common objects and using simple prepositions appropriately. He also had difficulty in articulating certain consonant blends and needed encouragement to engage in general conversation.

Objectives that were selected for Jonathan are listed in Table 3.

Insert Table 3 Here

TABLE 3. Case 2: Jonathan - Objectives

PERSONAL/SOCIAL	GROSS MOTOR	FINE/PERCEPTUAL MOTOR	COGNITIVE/LANGUAGE
*7. To develop the ability to feed oneself. 8. To develop the ability to be generally independent in toileting. 10. To develop trust relationships with teacher.	*1. To develop the ability to balance and to climb stairs. 2. To improve body awareness. 3. To develop the ability to throw and catch a ball. 4. To increase coordination and agility.	*2. To improve skill on writing and printing activities. 3. To develop the ability to discriminate among shapes and figures.	*1. To increase exploration and mastery of a broad repertoire of curriculum exexperiences. 3. To acquire readiness information. 4. To develop the ability to match, classify, and senate. 5. To develop pre-reading and early reading skills. 6. To develop the ability to understand number and to perform simple addition tasks. 8. To acquire auditory memory skills. 9. To stimulate expressive language usage. 10. To improve clarity of speech. 11. To develop the ability to name common objects correctly. 12. To learn to use pronouns and prepositions correctly.

*These numbers correspond to the Program Objectives listed in Table 1.

These two cases demonstrate how children who exhibit differing needs and abilities are provided with different, although overlapping, sets of objectives. These objectives are then utilized in the formation of appropriate classroom programs. In general, the individualized character of the Eliot-Pearson program yields a differentiated profile of emphasis within the overall set of Program Objectives. Figure 1 lists each of the Program Objectives and shows its level of emphasis across the entire population of eighteen handicapped children enrolled at Eliot-Pearson in 1977-78. Note that only two of the thirty-one Program Objectives were emphasized with every child.

Insert Figure 1 Here

The highly individualized approach represented in Figure 1 presents significant problems for the standard treatment-control group paradigm. That is, even if one were to assume an ideal situation in which there was substantive program success for each child, as well as reliable and valid quantitative assessment of these individual gains and a perfectly matched program and control group, it would still be unlikely that one would obtain evidence of significant program impact as defined by statistically significant mean differences across groups. A highly individualized program can be effective without all of its subjects moving in a particular direction on all dimensions within a single evaluation time frame.

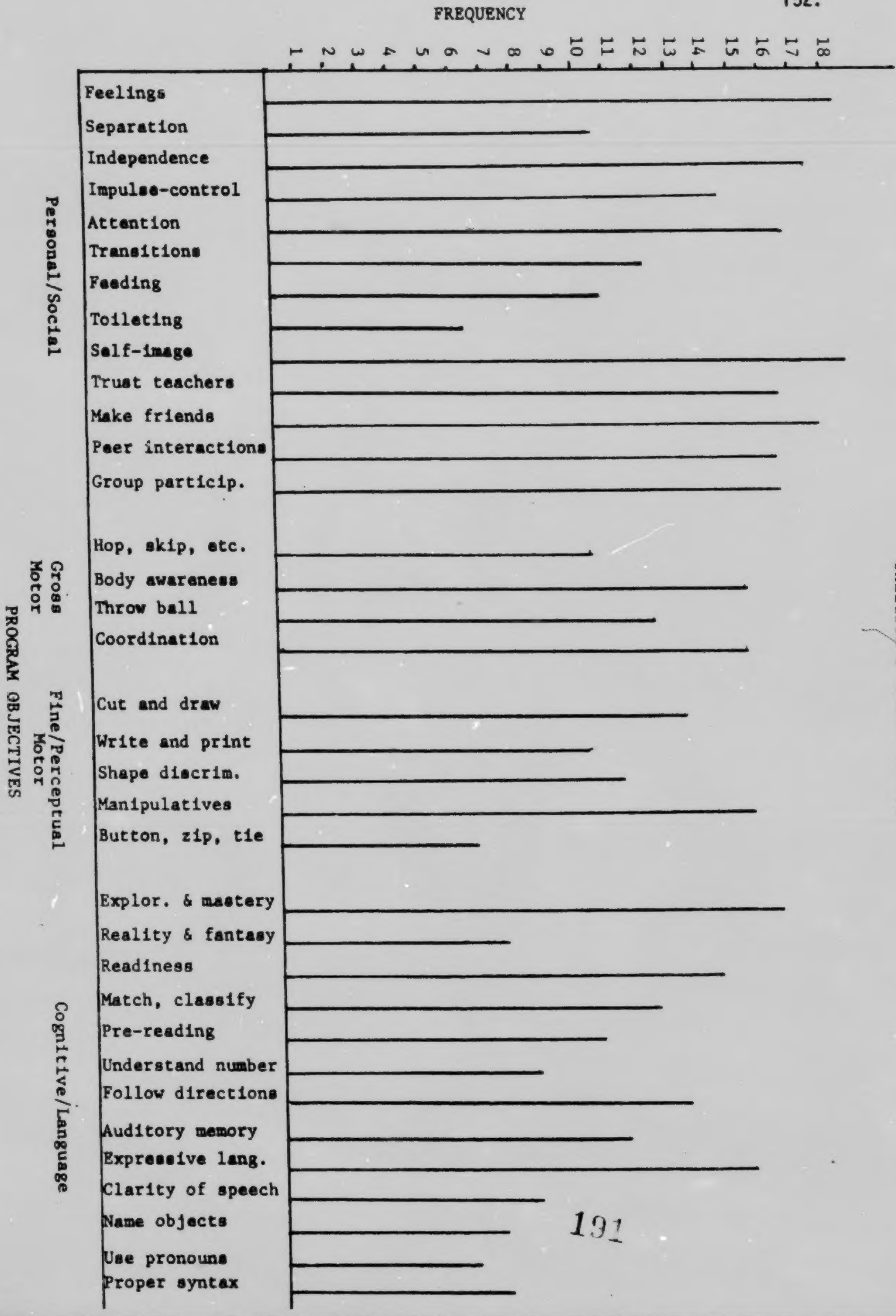

FIGURE 1

A Comparison of the Frequency With Which Each Program Objective is Emphasized for Children with Special Needs Enrolled at the Eliot-Pearson Children's School (N=18).

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Yet, this uniformity constitutes the implicit assumption of all traditional univariate and multivariate analysis methods. The large-scale investigation of the effectiveness of open classrooms by Bennett and his colleagues (1976) is subject to this criticism. In individualized programs the search for mean differences across groups in a variable-by-variable fashion is often futile, for there is usually considerably less statistical power than might appear on the basis of total sample size since each variable is only relevant for a small subset of cases at any particular point in time.

However, the problem of applying the standard evaluation paradigm to developmentally-oriented programs is even more complex than that which is revealed by the insensitivity of the "mean differences across groups" indicator of program effectiveness. Even if it were possible to measure short-term gains with perfect validity for each individual on each program dimension, a problem of interpretation would still exist. That is, in the absence of a detailed assessment of the needs of the individual child, and an account of the program "intentionality" or focus over the recent short term, it is impossible to place a value on the outcomes or conclusions yielded by the standard methodology.

For example, two four and a half year old children with special needs, enrolled in the same preschool program, may participate in standard program evaluation activities. For the first child, Case I, the needs assessment determines that the child is strong in the perceptual-motor area, but weak in gross-motor functioning. The short-term focus for this child is in the latter domain. For the second child, Case II, an opposite needs assessment and instructional emphasis emerges. The program thus focuses for the short term on improving perceptual-motor skills. Pretest and posttest data using the McCarthy Scales of Children's Abilities (McCarthy, 1972) is collected on each of the children as follows:

Case I (perceptual-motor strong, gross-motor skills weak)

	PRETEST		POSTTEST	
	Raw score	Index score	Raw score	Index score
Perceptual Performance	46	60	47	50
Gross Motor	16	31	32	40

Case II (Perceptual-motor weak, gross-motor skills strong)

	PRETEST		POSTTEST	
	Raw score	Index score	Raw score	Index score
Perceptual Performance	15	30	36	39
Gross Motor	44	63	44	56

Significant progress takes place in the gross-motor domain for Case I. In the period of six months the child has gained almost a standard deviation (s.d. = 10.0) on the index score. The child's perceptual-motor skills have remained steady. The posttest index score of 50 is equivalent to average performance of children at this age. Educationally, this would be considered a successful program experience. Similarly, for Case II there is meaningful progress in the perceptual-motor area, again a gain of almost a standard deviation, while gross-motor performance remains adequate for this age.

However, if all that one examines is the individual pre/post index score gains for the two cases, the results are quite different:

	Perceptual Performance	Gross Motor
Case I	-10	+9
Case II	+ 9	-7
Average	-0.5	+1.0

As suggested earlier, examination of mean gains indicates no dramatic effects. Further, while the data on individuals suggest some gains for subjects in some areas, the aggregate scores do not present a particular pattern. In fact, these scores reflect pseudo-negative effects (i.e., an individual short-term "loss" that is of no educational or clinical significance) counterbalancing important positive gains that are attributable to deliberate program activity.

In short, these considerations lead to the inescapable conclusion that there are important inconsistencies between the basic assumptions of the treatment control group paradigm and the reality of individualized open classroom experiences for special needs children. Clearly, the evaluation methods that are utilized must be carefully fitted to the nature of the program under study. For any strategy to be responsive to the complex structure of the open classroom it must focus on individual growth--too much is concealed in average differences. Further, it must examine individual progress in the full context of the individual case. Information on individual gains is often uninterpretable if removed from the context of the individual needs assessment and the resultant instructional efforts.

IV. Towards a Single-Case Evaluation Strategy

Appropriateness of Single-Case Experimental Methods. Most effectiveness questions for developmentally-oriented open classroom programs take place at a micro-level of activity. That is, although there are some questions that derive directly from the generic structure of the program, and can be projected onto every individual child (e.g., Are handicapped children interacting with peers as often as nonhandicapped children? or, Do handicapped children utilize the same strategies for obtaining teacher attention as their non-disabled peers?) , most cannot. Most questions concerning effectiveness require an examination of the impact of the educational program developed in interaction with the specific needs of an individual handicapped child. The problem that arises is thus how to study program impact in an individual case.

One alternative that merits consideration is the N = 1 research design methodology. Recent efforts (Hersen and Barlow, 1977; Krathochwill, 1978) have advocated more extensive use of this approach in research on clinical and educational settings. These designs have seen extensive use in basic research in special education (see Dukes, 1965;

Baer, Wolf and Risly, 1968; Yates, 1970; Kazdin, 1973; Blackman, 1972; Guralnick, 1973; Edgar and Billingsley, 1974; and White, in press).

There are two main versions in current use: the reversal (ABA or ABAB) design and the multiple baseline design. From the perspective of evaluating developmentally-oriented open classrooms, the reversal design is inappropriate since it is highly intrusive to the instructional process. It requires teachers to alter their interactions with the handicapped child for research rather than instructional purposes, and it assumes that there is no carry-over of the treatment effect across period reversals.

Multiple baseline designs appear more promising. The multiple baseline design involves the successive application of the treatment to a number of subjects who are being monitored continuously on the dependent variable. A treatment effect is inferred if behavior changes occur only upon application of the experimental variable. This approach makes less intrusive demands on the instructional process, it does not require large numbers of subjects, and it does not require a control group of children excluded from the program. It has been suggested by some (Guralnick, 1973; Wynne, Ulfeder and Dakof, 1975) that this approach is particularly well suited for highly individualized programming in a mainstreaming context.

The difficulties in applying this approach to evaluating the effectiveness of developmentally-oriented, open classroom activities are subtle, deriving from the shared control that characterizes the instructional process, and the developmental perspective concerning child growth, which views functioning as a system of interrelated skills set in a long-term framework. First, the multiple baseline design assumes that the evaluator can control the onset of the treatment to meet data collection needs. In open classrooms, however, the "treatment" is ever-present and the child may engage himself or herself before the adults initiate it or even without their knowledge.

Second, as a result of the shared control in open classrooms, there is only limited predictability that the program as actually experienced by the child will follow any a priori pattern or sequence. In fact, the environment that the handicapped child experiences in an open classroom is not fully defined until (s)he enters that environment. The child has impact on peers and teacher, and they have impact on each other in turn, creating a new set of relationships with their own boundaries and constraints. It is within this newly created organization that the child's program begins to unfold. Even if the program is highly purposeful, attempting to optimize development for the handicapped child, it is taking place within a framework whose future sturcture is only predictable in part.

Third, although there is clarity and purposefulness in the long-term goal structure for a program such as Eliot-Pearson, that is, competence in each of the basic developmental areas, there are numerous short-term routes that can be followed in the achievement of this desired end. From an educational perspective, each route may be equally successful. Thus, even if one comprehensively assesses an individual child's needs, no unitary instructional strategy or specific set of short-term objectives may be apparent.

In short, the multiple-baseline approach is an experimental strategy. As with all experimental methods (see Sutherland, 1973), it is predicated on the applicability of principles of prediction and control. In a traditional teaching situation where the teacher exercises primary control and in which instruction follows a predetermined sequence, experimental strategies are feasible as long as the teacher is willing to transfer that control to the evaluator. Open classroom settings, however, involve only modest levels of predictability and controlability. There are important differences between the characteristics of the open classroom experience and those educational settings typically subject to the basic behavioral research paradigm. These differences have significant consequences for the choice of an appropriate research methodology.

A Descriptive Single-Case Approach. In the absence of an appropriate experimental mode for examining the effectiveness of open classrooms on individual handicapped children, we have developed a descriptive strategy for examining individual child progress over the course of an academic year. Due to the limited utility of a priori individual child goals, the strategy begins with a goal-free orientation (see Scriven, 1972) focusing on a simple documentation/assessment of an individual child's needs.

This raises an immediate question of what can be admitted as evidence of child progress. Measurement issues represent a major concern in the evaluation of many different types of social programs. Some (see Patton, 1975) have argued that because of the generally primitive state of quantitative assessment, impact studies assess effectively only a narrow band of experience under restricted conditions. When we apply inadequate measures, Hein (1974) has argued that we almost by definition assure that open classroom programs are not favorably evaluated.

We view it as necessary to reconsider the wisdom of a purely empirical perspective. The quantitative information that can be collected provides at best a highly segmented picture of open classrooms. We propose to use such data as evidence to be combined with information gathered from a more qualitative/clinical perspective. In attempting to provide a rich picture of the individual case, we adopt a mixed multiple measure strategy. For example, in examining the effectiveness of the Eliot-Pearson program in achieving its objectives with individual children, we employed both quantitative measures, such as the McCarthy Scales of Children's Abilities (a standardized evaluation instrument), a classroom observational instrument, criterion-referenced checklists, and such qualitative strategies as clinical observations, structured and unstructured staff and family interviews, and regular program clinical notes.

Table 4 presents a matrix that relates program objectives to potential sources of evidence concerning progress towards these objectives. This matrix serves as a heuristic, since not every cell will be available on every child, and even if filled, the cells may not contain much useful information for a particular child vis-à-vis a particular objective. This is particularly true for some of the qualitative techniques, such as clinical observations. Nevertheless, the matrix is a useful planning device for examining the individual case, since it suggests sources of information and also indicates program objectives on which there is little or no information.

Although no single measure in this array may be individually strong, several measures taken together can create a total picture that reliably documents individual child progress over time. As a child develops, certain patterns consistent with this growth should emerge across the multiple measures. One may think of this approach as a set of windows, each providing a slightly different view of the same phenomenon. In the next section, an actual case is presented as an illustration of this mixed multiple measures approach for assessing child progress.

However, beyond simple strategies for documenting individual progress, a descriptive single-case methodology must also consider two other issues:

1. To what do we attribute the progress that we document?
2. Is this documented progress meaningful or educationally significant?

We examine the causal attribution question first; the second question is discussed later, in Section VI.

Attribution of Effect. It is impossible to obtain absolute causality in social science research. Attached to all of our "knowledge" is a measure of uncertainty reflecting the inadequacies of our theories and research strategies, and the inherent complexity of the basic social phenomena. Even the perfectly conducted randomized treatment-control group study provides only probabilistic evidence about treatment effectiveness. In contrast, anecdotal documentation of child progress constitutes weak grounds on which to make causal assertions about program impact. Even if the evidence concerning child progress is strong, there exist plausible alternative explanations for such progress (e.g., a natural growth spurt).

In the descriptive study of a single case it is not completely possible to counter every alternative explanation of observed progress. It is useful to attempt to catalogue for each case the possible explanations, and to assess from the perspective of the various participants in the process (e.g., parents, teacher, evaluators) the subjective likelihood of such alternatives. A demand for absolute evidence, however, is a demand for absolute causality (see Cronbach, 1975).

In focusing on the plausibility of the program impact hypothesis, we propose to examine the causal theory of action apparently operating in each case. According to Patton (1978), such an evaluation model requires that we make explicit the assumed causal relationships in the chain or system of objectives for the idnividual child, construct a means-end hierarchy, specify the validity assumptions that link the two together, and identify and collect appropriate data to examine the "goodness of fit" in the individual case.

The actual implementation of this causal theory of action evaluation model raises a number of questions that should be asked about each case:

A. Program as Planned

1. From an examination of the individual educational plan and available diagnostic data, what would be appropriate goals and objectives for this case?
2. If the program is effective for this child, what kinds of progress, stated a priori by parents, teachers, program directors and developers, should we expect to witness?

3. What kinds of program strategies would constitute reasonable means towards this end?

Although the information acquired from the responses to these questions is insufficient for the utilization of a goal-based evaluation model, the meaningfulness of any observed child progress must be examined in the context of the recognized special needs of the individual child. Without this base of data on the program as planned, it is difficult to make judgments concerning program effectiveness.

B. Assessment of Child Progress

4. What evidence is there that the child is making progress?
5. Is the documented progress consistent with the assessment of the child's needs and a priori expectations about progress?
6. What other possible explanations for observed progress are tenable (e.g., maturation, effects of other programs in which child may participate, other activities on the parents' part, etc.)?

We employ here the mixed multiple measures strategy to assist in determinations about progress. While careful assessment of a priori goals (from the data concerning the program as planned) is emphasized, progress should be monitored in each of the major developmental areas.

C. Program as Experienced

7. From the teacher's perspective, what is the program intentionality (i.e., what is it trying to do and why?) as it actually unfolds over time?

8. How does an outside observer characterize the child's experience in the program?
9. Is there congruence between the program as intended by staff and as experienced by the child?
10. To what degree are the experiences of the child a likely result of direct teacher behaviors, the general structure of the environment, or chance aspects of the setting, not subject to control by any method or individual?
11. What theoretical base or philosophical assumptions are required to establish the validity of the linkage between documented "means" (program as delivered) and documented "ends" (assessment of child's progress)?

These questions strike at the core of our investigation of the plausibility of the causal theory of action for the individual child. Answers to these questions can establish a basis for forming conclusions about the activities in which the program has purposefully engaged, and the linkage between such activities and observed child progress. A key element in the analysis is a search for consistency -- in differences in perspectives between teacher and observer, and in the means-ends linkages.

This set of eleven questions does not exhaust all of the questions that could be addressed in establishing the causal theory of action for an individual child. This set does, however, serve to illustrate several important features of the approach:

- It defines three basic categories of information in developing the causal theory of action for an individual case: the diagnostic/needs assessment of the child; the description of the program as experienced by the child; and the assessment of child progress.
- Since the phenomenon under study is dynamic and interactive, our research methodology is consistent with these qualities. The examination of the questions above is carried on in a prospective manner, beginning with the child's diagnostic assessment and following through the child's experiences during the academic year.
- This approach has an analytic, or detective-like logic similar to the modus operandi of evaluation methodology suggested by Scriven (1976). The evaluator is constantly interacting with the evidence, drawing on past experiences and searching the evidence for plausibility of the competing hypotheses.
- As an evaluation strategy it involves a combination of goal-directed and goal-free activities. While the educational plan for a child constitutes the starting point for the investigation, the specific content of questions asked and data collected may assume a much wider scope. Further, this scope may change over time in response to changes in program intentionality or observed child progress.

Thus, it should be clear by now that the primary purpose of the research strategy described above is to develop procedures for conducting an internally valid study of individual cases or individual children.

The traditional quantitative methodological perspective does not focus primarily on the question of internal validity, i.e., did the intervention produce the observed results? Rather, the focus of the traditional approach is on issues of external validity: will the results of a particular intervention generalize to other similar cases? Since external validity can rarely be ascertained from the study of a single case, to address these issues a replication across cases is essential. But such replications depend upon identity of diagnostic assessments, treatment approaches, and other variables that imply a level of controllability and predictability not found in open classrooms and rarely achieved in programs that give credence to individual differences. Such an individual educational program is described in the case study which follows.

V. An Application of the Causal Theory of Action Evaluation Model: Becky

A. Program as Planned.

1. Child Objectives. As noted in Case 1. Becky is a five year, ten month old girl who displayed unusual language usage, poor fine and gross motor skills, inappropriate social behavior, and a heightened sensitivity to distractions and details in her environment when she first entered Eliot-Pearson. In response to this set of expressed needs the program objectives presented earlier in Table 2 were selected. In particular, several objectives were heavily emphasized with Becky throughout the entire year. These included the ability to express feelings, to develop a sense of independence and self-confidence, to increase level of attention and involvement in activities, to improve the ability to make transitions, follow classroom routines and make self-regulated choices, to increase positive interactions with peers, to acquire skills of group

participation, to increase body awareness, to develop the ability to cut with scissors and use writing and drawing implements, to increase the ability to differentiate between fantasy and reality, to acquire readiness skills, to acquire auditory memory skills, and to stimulate expressive language usage.

2. Expected Outcomes. Becky was expected to make progress during the year, in particular in the personal/social domain. Progress would be noted in sustained attentional ability, increased independence with appropriate reliance on teachers, increased ability to share materials and space with other children, greater proficiency in making transitions, and increased ability to participate appropriately with other children during group activities.

3. Classroom strategies. A variety of strategies might be utilized in helping to effect change for Becky in the personal/social domain. Since Becky preferred the dramatic play area of the classroom where she could become self-absorbed in doll play, her doll could be utilized as a transition object to introduce her to other areas of the room. With doll in hand, the teachers might direct Becky to the fine motor area, for example, and structure an experience for her from which she could derive success, such as an open-ended activity using one-inch cubes. As the year progresses, the tasks can become more structured and longer in duration. The teachers should expect to maintain proximity to Becky but to decrease their immediate presence with her. However, they will probably continue to be required to assist her in making transitions. Peers should be encouraged to use the same area of the classroom as Becky occupies, with teacher-directed

modeling of shared behavior. Eventually, it is hoped that Becky will be able to participate in small group experiences with minimal teacher intervention and generally appropriate behavior.

B. Assessment of Child Progress

4. Evidence of Progress. At the end of the year, Becky's progress was tabulated by individual objectives on the following chart. This chart reflects the totality of the program objectives; however, only certain of these objectives and data points were particularly relevant for Becky.

Insert Table 4 Here

The chart includes seven categories in which data is collected throughout the year. Objectives considered relevant to assessing progress are those which have more than two recorded data points. A description of the major catogories follows.

The MSCA, or McCarthy Scales of Children's Abilities (McCarthy, 1972), is a formal assessment instrument specifically selected to evaluate cognitive functioning in young children. It was administered in a pre/post format in the fall and spring.

A formal classroom observational instrument was also utilized in a pre/post format coincident with the MSCA. This particular procedure counted frequencies of social interaction between Becky and her classmates and teachers, as well as frequencies of levels of play (Parton, 1932), during a twelve minute period of time. Becky was observed four times in

TABLE 4
Evidence of Progress: Becky

	MSCA	OBSERV. INSTRUMENT	TUTORIAL	CLINICAL OBSERV.	FINAL REPORT	DEVELOP. CHECKLIST	SAMPLE	SUMMARY ASSESSMENT OF CHANGE
PERSONAL/SOCIAL								
1. Feelings			++		†	++		++
2. Separation			++		++	++		++
3. Independence			†	++	†	†		++
4. Impulse-control			†	++	†	†		++
5. Attention		†	†	†	†	†	†	†
6. Transitions			0	+	+	0		0
7. Feeding								
8. Toileting								
9. Self-image			†		++	+		++
10. Trust teachers			++		†	++		++
11. Make friends			+		++	+		+
12. Peer interactions		†	++		++	++	++	++
13. Group participation		++			+	†		++
GROSS MOTOR								
1. Hop, skip, etc.	++		†		++	+		++
2. Body awareness								
3. Throw ball								
4. Coordination			++		++	++		++
FINE/PERCEPTUAL MOTOR								
1. Cut and draw	++		†		++	+		++

TABLE 4

Evidence of Progress: Becky (continued)

	MSCA	OBSERV. INSTRUMENT	TUTORIAL	CLINICAL OBSERV.	FINAL REPORT	DEVELOP. CHECKLIST	SAMPLE	SUMMARY ASSESSMENT OF CHANGE
FINE/PERCEPTUAL MOTOR (con't.)								
2. Write and print	0		+		++	+		+
3. Shape discrimination								
4. Manipulatives	++		+	†	++	++		++
5. Button, zip, tie			+		0	0		0
COGNITIVE/LANGUAGE								
1. Exploration and mastery			++		†	++		++
2. Reality and fantasy				+	+	+		+
3. Readiness	++		++		†	0		++
4. Match, classify								
5. Pre-reading								
6. Understand number								
7. Follow directions			++		++	+	†	++
8. Auditory memory	0				+	0		0
9. Expressive language	++	++	++		++	++		++
10. Clarity of speech								
11. Name objects								
12. Use pronouns								
13. Proper syntax								

Key: Degree of Change

†	Better than average change
++	Average change/developed appropriately
+	Little change/not as much as average child
0	No change

the fall and spring. Reliabilities were achieved between two observers for all categories.

Tutorial was included in Becky's program twice a week to further reinforce her general skill development. Specific objectives were chosen that were appropriate for a one-to-one setting; a variety of teaching strategies was utilized throughout the year. The tutor assessed Becky's change on specific objectives at the end of the year. An independent observer completed open-ended clinical observations on Becky four times during the year while Becky was participating in class activities. These observations yielded descriptive information about Becky's social interactions, her involvement with materials, her play activities, interactions with teachers, quality of group participation, and general affective tone. Judgments were made from the descriptive data to be included on the matrix.

At the conclusion of the school year, teachers completed a final report concerning each child. This constituted a descriptive narrative which assessed each child's development in all major domains.

A developmental checklist was completed by the teachers twice during the year. It included a delineation of specific objectives in a criterion-referenced format, with comments about a child's progress or development on relevant objectives.

Finally, time samples were developed on an individualized basis for a few objectives which required more extensive documentation. This procedure was administered monthly to assess ongoing progress in a specific area. For example, Becky's ability to sustain attention during a manipulative activity was monitored on a regular basis.

Table 4 summarizes Becky's evidence of progress on each of the individual program objectives selected for her. An assessment of the degree of change is indicated for each instrument containing relevant data concerning a specific objective. Change is shown by means of a four-point scale ranging from "0" (i.e., no change) through "†" (i.e., better than average change). Blank cells in the matrix appear if a particular instrument contains no data relevant for that objective. The last column in the table provides a summary assessment of all the evidence available for assessing progress on each individual objective. It should be noted that rules for assessing each data point were developed in the context of each case. Greater attention must still be devoted to standardizing and more clearly articulating these decision rules.

5. *Consistency of Expectations and Progress*. Consistency of progress expected and progress recorded was evident at several points. For example, with the objective, "Becky is to increase her level of attention and involvement in activities," (Objective 5, Personal/Social), the *formal observation* indicated that Becky decreased in unoccupied play and increased in solitary and parallel play. *Tutoring* noted that Becky was able to attend and focus on an activity for as long as fifty minutes; this was also confirmed by the *clinical observer*. The *final report* showed that Becky had increased her attention during structured activities. Becky displayed less distractibility and more ability to sustain her attention as noted significantly in her on-task behavior. All of these categories represented a high degree of change; thus, Becky was judged to have increased in her attentional abilities, and this was identified as an area of need for her.

In contrast, Becky made minimal progress in "improving her ability to make transitions independently" (Objective 6, Personal/Social). The tutorial report noted Becky's continued difficulty in making the initial transition from the classroom to the tutoring room adjacent to the classroom. The clinical observer reported Becky's repeated need for teacher support during transitions. Finally, the final report and developmental checklist corroborated the earlier observations. All four data points reported a minimal change score, indicating little or no progress for Becky on this objective, although this was also considered an important objective for her.

Progress was consistent for Becky on nine of the eleven Personal/Social objectives initially selected for her. From the two previous examples it can be concluded that Becky's attentional ability increased across all categories while the evidence indicated that Becky was not able to show gains in making transitions this year.

6. Other Explanations for Progress. Becky was not enrolled in programs other than those she experienced at Eliot-Pearson. Thus, change that was perceived in Becky could not be attributed to inputs from other programs. Indeed, her parents reported that, with rare exceptions, her only exposure to other children occured during the school program. No doubt maturation played an important role in Becky's development, however, the fact that she was able to keep pace with her nonhandicapped peers in nearly all areas of development is indicative of the effectiveness of the program, given Becky's needs and abilities at the outset of the school year.

C. Program as Experienced.

7. Program Intentionality. In addition to assessing change on individual objectives, it is critical to examine the role of the program

in actually effecting the changes noted in Table 4. The first component in this assessment requires gathering information on teachers' perspectives concerning individual program activities. At Eliot-Pearson teachers were interviewed at the end of the year to ascertain their impressions of the involvement of the program, or the "program intentionality," in actually bringing about change in children on particular objectives.

Teachers were interviewed concerning the interaction of five variables with each child on each objective. The variables were as follows:

1. Adults -- the role directly played by teachers and other professionals in bringing about change.
2. Peers — the role played by interaction with, or observation of peers in bringing about change.
3. Physical Environment -- the role played by the physical arrangement of the classroom space in bringing about change.
4. Instructional Materials -- the role of direct use or manipulation of learning materials in bringing about change.
5. Other -- the role of other program-based inputs, such as tutoring, speech therapy, physical therapy, etc. in bringing about change.

These particular variables were selected because they are salient features of the open educational framework to which the program at Eliot-Pearson adheres. Teachers were asked to assign an "intentionality score" to each of these variables based on a one-to-four scale in which one indicated "was not responsible for perceived change" and four is "was critical in bringing about change." The intentionality scores" for Becky are shown in Table 5.

TABLE 5

Program Intentionality: Becky

	Teacher Emphasis	Adults	Peers	Physical Environment	Materials	Other (Tutor)
PERSONAL/SOCIAL						
1. Feelings	yes	4	3	2	3	3
2. Separation	yes	3	2	2	2	3
3. Independence	yes	4	2	3	2	3
4. Impulse-control	yes	4	2	2	2	2
5. Attention	yes	4	2	2	4	4
6. Transitions	yes	4	2	3	3	3
7. Feeding	no					
8. Toileting	no					
9. Self-image	yes	4	2	3	3	3
10. Trust teachers	yes	4	1	3	3	3
11. Make friends	yes	4	3	3	3	3
12. Peer interactions	yes	4	3	3	2	2
13. Group participation	yes	4	2	3	3	
GROSS MOTOR						
1. Hop, skip, etc.	yes	3	2	3	3	2
2. Body awareness	yes	4	2	2	3	3
3. Throw ball	no					
4. Coordination	yes	3	2	3	3	2
FINE/PERCEPTUAL MOTOR						
1. Cut and draw	yes	3	2	4	4	4
2. Write and print	yes	3	2	4	4	4

TABLE 5

Program Intentionality: Becky (continued)

	Teacher Emphasis	Adults	Peers	Physical Environment	Materials	Other (Tutor)
FINE/PERCEPTUAL MOTOR (con't.)						
3. Shape discrimination	no					
4. Manipulatives	yes	3	2	4	4	4
5. Button, zip, tie	yes	3	2	2	2	3
COGNITIVE/LANGUAGE						
1. Exploration and mastery	yes	4	2	3	3	3
2. Reality and fantasy	yes	4	2	4	4	
3. Readiness	yes	3	2	3	4	3
4. Match, classify	no					
5. Pre-reading	no					
6. Understand number	no					
7. Follow directions	yes	3	3	3	2	3
8. Auditory memory	yes	3	2	2	2	
9. Expressive language	yes	4	2	4	3	4
10. Clarity of speech	no					
11. Name objects	no					
12. Use pronouns	no					
13. Proper syntax	no					

Insert Table 5 here

This table can be used to summarize the program from the teacher's perspective. It graphically represents the teacher's theory of action or the teacher's account of what took place in the classroom during the course of the year. The format for displaying this information is consistent with the major features of the Eliot-Pearson program. A different educational approach, or a different evaluation audience, might entail a different format. The format shown in Table 5 was adopted as a means of examining the teacher's judgments concerning the program's accomplishments. For example, the objective, "to increase the level of atention and involvement in activities," was highly emphasized for Becky. Adults (rating = 4) were an integral part of helping Becky sustain her attentional level, while peers (rating = 2) were not an essential component in achieving this objective for Becky. Physical environment (rating = 3) was less important than materials (rating = 4), although both of these variables were considered by Becky's teacher to be critical to the acquisition of her increased attentional abilities. That is, specific meterials were utilized to help her learn to focus, while the arrangement of the physical environment into small, contained learning areas facilitated the teacher's work with Becky.

It should be noted that in developing their report on program "intentionality," Becky's teachers drew heavily on their memories, case notes and anecdotal records. In future efforts,the quality of the data would be enhanced if teachers were interviewed periodically throughout the year, rather than simply at the end of the year. Information gathered from several time points would provide valuable data concerning changes in teacher perspectives over time. In addition, such a strategy could serve as an ongoing mechanism for resolving apparent inconsistencies (see question 9 below) between the theory of action as articulated by the teacher and as viewed by outside observers attempting to characterize the program's effects as experienced by the child.

8. Outside Observers. The information described above forms the basis for a retrospective clinical case study. Taken alone, it constitutes a limited data base for conducting applied research (see Hersen and Barlow, 1976). It provides one perspective concerning a highly interactive phenomenon. Thus, information from an outside observer attempting to view the program as experienced by the child represents a critical comparison standard. When these data - collected by observers "blind" to reported program intentionality - agree with teacher reports, the validity of the description of the program is greatly enhanced. When inconsistencies appear, they suggest possible weaknesses in the program's intended theory of action, and could thus prove valuable in informing future program efforts.

Since only four observations of Becky were conducted during the course of the year, only limited information was obtained. Nevertheless, when combined with the data from the formal observational instrument, some interesting conclusions could be drawn. For example, the structured observations of Becky showed, with the attention objective, that she increased significantly in solitary and parallel play by the end of the year. The informal open-ended clinical observation also yielded a trend towards longer sustained involvement in activities.

In short, the observational data are critical to the successful implementation of the descriptive singe case strategy. In planning future evaluation efforts, greater attention should be focused on developing procedures for gathering data on the program as experienced by the child.

9. The Program as Intended and as Experienced. Due to the limited observational data noted above, judgments concerning the congruence between the program as described by the teacher ("program intentionality") and as viewed by outside observers ("program as experienced by the child") was also quite restricted. Where observational data did exist for Becky, congruence was obtained in most instances. For example, Becky was encouraged to devote a great deal of time and attention to utilizing the manipulative materials in the classroom. On virtually all measures of progress she displayed increased competence, flexibility and ingenuity in using blocks, rods, counting cubes, chips, interlocking puzzles, etc. The clinical observer frequently recorded Becky's successful experiences with manipulatives, whereas her teacher indicated that increasing Becky's feeling of comfort and competence with these materials was a critical objective during the school year.

10. Intended Effects vs. Chance Effects. An overall review of Becky's status when she entered Eliot-Pearson, of the program as planned and presented, and of the observable changes that she demonstrated indicate a high level of intended effects. Specifically, Becky entered the program at Eliot-Pearson with difficulty in her language usage, social behavior, skill development, and attentional skills. Coincident with her assessed needs, specific objectives were selected for her and evaluative information was collected across a number of data points.

At the end of the year, progress was evident across all major domains. Becky made progress in the personal/social area as indicated by increased attentional level, increased independence, increased ability to join other children in play and in sharing the same space, and increased ability to participate in small group activities. Gains were not evident in making transitions in the classroom.

In the motor area, Becky was more aware of her body in space and better able to plan her body movements. She showed more facility in manipulating small objects and in using scissors and writing tools. She did not show change in buttoning her own clothing, however.

Becky's cognitive and language skills were the least emphasized this year. Nonetheless progress was indicated on a few objectives. Becky used more areas of the classroom, learned color and shape names, followed two-step directions, and was more appropriate in her conversations. She showed little or no change in differentiating reality and fantasy and in her auditory memory skills.

The program as planned for Becky this year was intentional in its attempt to effect change on specific objectives. Progress was evident for many objectives while others were more resistant to change. A reassessment of Becky's needs is in order as well as a scrutiny of teaching strategies which were effective with her this year. In this manner the parameters of the program which were effective for her will become more apparent.

11. Theoretical Position. The program as implemented for Becky reveals an assessment of her needs; it also yields an insight into the basic orientation of the Eliot-Pearson approach. Personal/social objectives are afforded great care and great attention. Becky is

assisted in learning how to interact with her social environment -- both peer and adult. She is also encouraged to interact with and explore the physical environment of the classroom. Indeed, in many instances cognitive objectives are utilized as means to affective ends and actual implementational strategies are developed in the teaching-learning process. This approach thus reflects an emphasis on interactivity at all levels of performance and learning as well as a deliberate attempt to enhance development through increasing every child's ability to adapt to a continually challenging learning environment.

VI. Placing a Value on the Effectiveness Data

The "Standards of Comparison" Issue. We have related in some detail a causal theory of action model for evaluating the impact of open classrooms on individual children with special needs. From our pilot experiences with this approach we are convinced that it is quite possible to make statements with a high degree of certainty about program impact on an individual child. Nevertheless, we still must confront the standards-of-comparison issue. That is, "Are the results obtained with some particular child at Eliot-Pearson better than would have occurred in some alternative program?"

Ideally, it would be desirable to have data on how the child in question would have progressed under each of the alternative treatments possible. Thus, the treatment control group paradigm "solves" the standards of comparison problem by creating a randomly assigned group that receives no services. Because of ethical considerations and recent legal mandates that provide an appropriate education for all children, it is impossible to propose a "no services" group as the standard since, in principle, every handicapped child should receive some services somewhere. This consideration also greatly limits the utility of the multiple baseline design since it too requires "non-treated" cases.

In general, the only reasonable standard for judging the progress of an Eliot-Pearson child is against the progress of children with similar needs and a similar educational plan in other eligible service placements. Extensive logistical difficulties arise when attempting to establish valid comparison bases of this kind. For example, at Eliot-Pearson the group of special needs children represents a diverse array of diagnostic assessments and handicapping conditions including Down's Syndrome, hearing impairment, cerebral palsy, blindness, learning disability, developmental delay, emotional disturbance, etc. Essentially, the program is delivering eighteen highly individualized programs, each with its own goals, objectives and implementational strategies. Even where objectives are the same across children, they may still require a different comparison standard since the developmental restrictions and expectations imposed by different handicapping conditions may be quite different.

In short, this situation implies a need for different standards of comparison for each child where the choice of an appropriate standard is based on an identification of important developmental features of the child. These developmental standards do not currently exist, and it is likely that numerous difficulties would be encountered in any effort of this kind. To develop such quantitative standards would require the establishment of an extensive data bank of special needs cases. Diagnostic assessment, program description, and child progress data would have to be included. It would require a standardized reporting of information, and taxonomic procedures for accumulating similar cases would also have to be developed. In addition, it would require new strategies for analyzing these data bases similar to the short time series methods being developed by Strenio, Weisberg, and Bryk (1978) and by Goodrich (1978). It is not clear that such standards will ever be developed.

The problems are further compounded by the fact that different programs and approaches may value very different short-term goals and objectives. For example, an open classroom program might have short-term goals for a specific handicapped child that could be quite different from those of a program with a more behavioral persuasion. These alternative programs simply define "progress" differently in the short term. Comparisons across these kinds of programs cannot be reduced to an empirical decision rule since the issue in question is either a theory, or in the absence of theory, a set of values. Lacking the theoretical base to resolve such questions, this type of comparison question becomes a matter of personal choice. The best that can be achieved is a careful description of the differences across programs in terms of their causal theories of action in similar cases; the differential patterns of progress that emerge from each of these programs would also have to be articulated. Such analyses could prove very useful to individual teachers and parents confronting child placement and personal value decisions. However, such information cannot be used by evaluators to decide that a particular program type is "better" or "worse" than some other program.

At the core of the standards of comparison issue is the question of whether the observed child progress is educationally meaningful. The traditional treatment control group approach, even when perfectly implemented, does not directly provide information of this sort. Rather, this approach substitutes statistical significance (e.g., a significant t statistic associated with a mean difference between two groups) of an estimated effect for the educational signifcance of any measured program effect. When such studies attempt to assess the educational significance of the intervention they invoke essentially arbitrary standards (see Carver, 1978). For example, in the recently completed Follow Through evaluation, the evaluators defined mean difference between groups of one-quarter of a standard deviation on a normed test as "educationally significant" (Stebbins, et. al., 1977). This is an arbitrary criterion with no established theoretical base.

Thus, in the absence of a theoretically grounded longitudinal data bank of the type suggested above, decisions about the meaningfulness of individual progress should be based on individual clinical judgment. Clearly, in some cases there will be overwhelming agreement. In other cases, however, there may be substantial disagreements stemming largely from very different individual value frameworks. It is important to realize that this situation is not greatly different from that of the well implemented treatment control group study. The continuing debates and the persistence of different points of view regardless of the results reported in a particular study or the quality of the methodology utilized attests to this inherent ambiguity. In proposing a descriptive single-case methodology, we have simply focused on the "meaningfulness question." The treatment control group approach, with all of its quantitative machinations, simply sidesteps the important question -- "Does it really matter enough to act on the information?" This is the key policy or action issue.

Usefulness of Program Effectiveness Data. The approach presented in this chapter suggests the need for a reexamination of the rationale for program impact evaluation. One rationale that becomes apparent is the use of program effectiveness data in the management of information concerning individual children. Open classrooms based on developmental principles require a form of ongoing evaluation that assists teachers in making sense of what their pupils are working on, and that informs them of some of the effects of their own behavior. The method commonly used in open classrooms to achieve these purposes is that of informal, naturalistic description. The open classroom teacher, as reported in the literature (see, for example, Brown and Precious, 1968), constantly "jots" down pertinent information about the child and his/her activities. These informal records presumably comprise the child's evaluation. There are several problems with this "method," problems that might conceivably be eliminated by the descriptive single-case approach presented in this chapter.

The first problem is that of information overload. Naturalistic-phenomenological records are descriptions of behavior unbiased with respect to content: everything the child does is included in the records. Of course, it is impossible for a teacher to mark down or remember more than a fraction of what each of his/her students does every day. But this fraction mounts up. The records of 25 to 30 children can become immense within a few months. As they grow in length the information they contain becomes increasingly difficult to use and to assimilate. Therefore, as the information accumulates, teachers' perceptions become more rigid and inflexible. Their categories for assimilating this information cannot keep pace with the increase in information; their view of their pupils is thus one of gradually reconciling new behavior to old patterns of perception. Their behavior becomes stereotyped, loses its diagnostic and interpretive function and instead of evaluation of on-going changes in learning, their informal reports begin to resemble lists of behavioral outcomes.

In other words, as the teacher's records of informal observations concerning each child grow, it becomes increasingly difficult to follow the effects of the complex of previous interventions and explorations. The resulting lists of behaviors are low on information. Given the interactive qualities of teacher decision-making in open classrooms, and the requirements of individualization for children with special needs, as the teachers' information about their pupils becomes limited, the learning experience for those children correspondingly narrows. The descriptive study of individual children that is outlined above can be utilized as an information management system to guide the implementation of the diagnostic-prescriptive process in open classrooms. Such a system will not encounter the problems of "information overload" because it is designed to integrate and organize large quantities of disparate data concerning teacher intentions and children's experiences. Whether this potential use is realized is principally a matter of whether or not teachers and program directors find the data generated by the mixed multiple measure strategy useful enough to warrant the required contribution of their time to data collection efforts.

A second use of the effectiveness data generated by the individual case studies affects parents of special needs children. If descriptions of educational programs of other children similar to their own were made available to parents, it could help to make concrete the meaning of different causal theories of action of various programs and to present more clearly the likely outcomes associated with each alternative. This should lead parents to a more informed choice concerning program placements for their special needs children.

Third, as cases are accumulated over time they provide an opportunity for building a knowledge base concerning the effectiveness of special education programming and educational alternatives in general. Although it is not possible to make direct inferences for future practice from any single individual case report, replication across similar cases would certainly provide such a basis. In order to accomplish this task it is necessary to develop procedures for systematically accumulating the cases and for summarizing across the descriptive evidence. It would be desirable to utilize a methodology that combines the concreteness of the individual cases with efforts aimed at building general program theories of action. The qualitative data analytic method (see, for example, Denzin, 1970; and Schatzman and Strauss, 1973) seems best suited for this purpose.

VII. Summary and Conclusions

Traditionally, the treatment control group paradigm has been utilized in the evaluation of program impact. In this chapter, however, we have argued that this approach does not address the fundamental tenets of an open classroom which embodies a developmental perspective. An alternative to standard experimental design is presented, and its application and relevance to open classroom settings is discussed.

In the chapter we identify several key features of the open classroom to which such an evaluation approach must be responsive. First, the dynamic characteristics of the developmental perspective and the interactive nature of open classrooms creates a context characterized by only limited predictability. This characteristic presents problems for any goal-based evaluation model. Second, the basic decision-making in open classrooms reflects shared control between teachers and children. This control cannot be transferred to the evaluator without seriously distorting the basic nature of the intervention. This feature of open classrooms is very important since it implies that experimental research strategies, which require evaluator control, are not feasible in this context. Third, the highly individualized nature of programming for special needs children within the open classroom can create very complex short-term implementational structures. Such structures can only be understood by examining individual child progress in the full context of that case.

In response to these perceptions, we have pursued a descriptive single case methodology. Our approach requires the development of a causal theory of action for each case. It is based on the logic of an analytic investigation (see Scriven, 1976) in which every piece of information constitutes evidence concerning child progress or the alternative causes of that progress.

The mixed multiple measurement strategy represents a critical feature of this process. This approach permits the use of both quantitative and qualitative data, teacher reports and observers' records, normative scores and criterion referenced milestones. It involves an *examination of all of the evidence that it is possible to collect*. While statistical methods can play an important role in helping to evaluate the evidence, they do not dictate a rigid research sequence that must be pursued.

We have sketched out and illustrated an approach to implementing these ideas. This framework was developed in an attempt to assess the effectiveness of the developmentally-oriented program at the Eliot-Pearson Children's School. It is offered as a tentative first step. We hope that by presenting it here we might stimulate further thought on the basic issues of evaluation and encourage the continued use and refinement of this approach.

In our experience this approach provided an accurate perspective concerning the impact on special needs children of the developmentally-oriented open educational program at Eliot-Pearson. It helped us to identify some successful teaching strategies, as well as aspects of the children's development that required greater attention, consideration, and planning. Finally, it was useful in generating information that enabled each potential user -- teachers, program directors, parents, and other professionals -- to address the real *valuation* question, "has the program made a meaningful contribution to the lives of children?"

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IV. INSERVICE TRAINING AND EVALUATION OF TEACHING STAFF

A. Accomplishments

1. Inservice Training

Inservice training for Project staff takes place during regularly scheduled staff meetings. The entire full-time staff meets every Wednesday from 2:00 - 5:00 P.M. Staff meetings serve typical administrative purposes, but also afford opportunities for communication among the staff as a whole and for staff development and training.

On alternating weeks the school's consulting psychiatrist, Dr. Samuel J. Braun, is present from 3:00 - 5:00. Case conferences and presentations are made when he is present. In 1977-78, Dr. Braun was present at nine staff meetings. Case presentations were frequently extended to include discussions of general issues implied by a given child or family situation. Examples of these issues include retardation, alcoholism, elective mutism, separation, hyperactivity, the effects of medication, talking with parents about handicaps, terminal illness and death, "super heroes," etc.

On alternate weeks, the 3:00 to 5:00 period is reserved for discussion of related issues, workshops, films, etc. Typical topics and activities covered during this time period included:

a. The history and responsibilities of the BEH funding at the Children's School;
b. Discussion of evaluations: Gesell, WPPSI, Stanford-Binet;
c. Film: Like Other People;
d. Film: People First;
e. Discussion of defect vs. developmental theories of retardation;
f. Hospitalization;
g. Discussion and videotape of Gesell evaluation;
h. Informal assessment workshop;
i. Documenting children's classroom progress;
j. Discussion of research on mainstreaming project;
k. Discussion about home-teaching;
l. Strategies for working with parents on mainstreaming;
m. Workshop on motoric training;
n. Workshop on music;
o. Discussion of organic curriculum;
p. Further discussion of talking with children and parents about handicapps;
q. Talking about our feelings about handicaps.

In addition to weekly meetings, the staff meets as a whole for three days in January following winter vacation. During these three days the effectiveness of the entire program is evaluated in depth. In 1978-79 opportunities for evaluation and reflection will be instituted in the school calendar on an approximate six-week schedule.

Finally, during the fall of 1977 the School was fortunate to have Mrs. Frances P. Hawkins spend two days observing and meeting with staff members. Mrs. Hawkins is associated with the Mountain View Center for Environmental Education at the University of Colorado, Boulder. She provided extremely valuable remarks and insights concerning the program in general and our approach to mainstreaming in particular.

2. Staff Evaluation

The teaching staff at the Children's School is highly experienced. In 1977-78 the mean number of years of teaching experience represented by the staff was 5.0 years. Accordingly, teachers are expected to perform in an exemplary fashion in the classroom. In order to provide feedback to the staff concerning their classroom teaching, an evaluation form, entitled "Criteria for feedback" was developed and used in 1977-78 (See Appendix 5).

The purpose of the form, as stated on its cover page, is to provide teachers with feedback to be able to identify areas of their work which meet expectations, exceed expectations and that are in need of development. The evaluation is not summative. Rather, it is intended to assist teachers in maintaining strengths and developing new areas of competence.

In 1977-78 the forms were filled out in December as a self-report, by individual teachers, and by the Project Director and Associate Director of the school. A meeting was held in which responses were compared and a "contract" about next steps was agreed upon. The forms were filled out again in February, after there had been an opportunity for the contract to be implemented. Responses were once more compared, and next steps were again agreed upon. This approach to evaluation was considered successful by all participants and will be continued.

B. Slippages

None

V. TRAINING FOR PERSONNEL FROM OTHER PROGRAMS

A. Accomplishments

1. Department of Child Study Training Grant

The Department of Child Study was awarded a Part D training grant from BEH co-terminus with this project's award. Nine trainees were enrolled in the Masters level program beginning in July, 1977. In cooperation with the Training Project Director, each trainee chose a placement experience within the School during the summer.

2. Other Students

A total of 65 students received training or direct classroom experience in the project. They can be classified as follows:

Experience	Number of Students
student teaching	10
graduate assistant	3
BEH trainees	7
tutors	16
field work placement	19
work-study students	3
volunteers	7
	65

The level of exposure in this group ranges from a one-day per week volunteer to a graduate assistant who commits 20 hours per week in the classroom plus additional time for preparation. Numerous other students utilize the school as an observation site to satisfy other course requirements (see Section VI).

During the course of the three years, nearly 200 students received training of this type.

3. Dissemination Sites

In the section that follows (Dissemination and Training) extensive documentation of the Project's dissemination/training activities is provided. This section should be referred to in order to determine the overall impact of Project LINC's training activities.

B. Slippages in Attainment

None.

VI. DISSEMINATION AND TRAINING

A. Accomplishments

1. Dissemination

The primary function of dissemination activities for Project LINC has been the development of awareness among a variety of audiences about one option in mainstreaming young mild to moderately handicapped children: the Eliot-Pearson demonstration model. A secondary purpose has been to encourage the adoption by these audiences of as many elements of the demonstration model as appropriate.

As a result of exposure to the model a number of specific and significant changes were anticipated. The projected changes varied with the audience. However, in each case, increased general awareness and familiarization with our approach to mainstreaming young children with special educational needs were expected.

Dissemination activities will be described in terms of specific areas. These areas are (a) observers; (b) demonstration; (c) workshops; (d) regional and state information sharing; (e) presentations; (f) print materials; (g) training manual; and (h) media.

(a) Observers: Each classroom at Eliot-Pearson is equipped with a two-way vision observation booth. Each booth holds approximately 16-18 people. During the three year demonstration phase Eliot-Pearson has had approximately 4,500 registered visitors. This figure includes Tufts students and non-Tufts observers. Many Tufts students make multiple observations. Numbers are not available for that group. In addition, visitors occasionally neglect to register. The combined figure of non-registrants and multiple visit students would probably inflate the 4,500 figure significantly.

The range of visitors at Eliot-Pearson includes visitors from Universities, preschool and daycare facilities, hospitals, regional public schools, visitors from out-of-state and foreign visitors (including observers from England, Australia and South America).

(b) Demonstration: Demonstration activities have been designed to expose audiences to the Eliot-Pearson model, as well as to provide an opportunity for discussion. Demonstration activities include: observation in classrooms, viewing of one of the three Project slidetapes, followed by a discussion period shared with the Project Director, Associate Director or Dissemination Coordinator. This session is designed to raise issues and to provide information germane to the concerns of the visitors. Specific discussion topics have included: individualizing curriculum in the integrated classroom, services for parents, modifying classroom space, classroom management issues, etc.

From 1975-1978, demonstration activities have been carried out with a number of groups that visited Eliot-Pearson including groups from Head Start, public schools and in many instances, visitors from out of state.

(c) Workshops: Dissemination Workshops have been designed to provide specific content information about a particular aspect of the demonstration model at the Children's School. Topics vary according to the needs of the audience. Over the three year period topics have included mainstream awareness, informal assessment in integrated classrooms, early childhood formal assessment, adapting regular classroom materials for children with special needs, and models for inservice training about mainstreaming. Workshop audiences were primarily public school kindergarten teachers, but also included private preschool groups and Head Start.

Project LINC staff have provided workshops over the last three years for a variety of instate and out of state audiences. Some of these include:

1976: Early Childhood Conference, Portland, Maine. Children's School Associate Director, Dorothea B. Marsden presented the mainstreaming model developed at Eliot-Pearson.

1976-78: Boston Association for the Education of Young Children workshops were conducted by three Children's School Staff Members: Sarah Fujiwara, Special Needs Resource Teacher; Roberta Pasternack, Special Needs Resource Teacher; Arthur Sills, Head Teacher. The workshops addressed mainstream awareness issues, materials adaptation and creative movement. In all cases the Children's School was cited as a demonstration model.

March and April 1977: Project LINC was a co-sponsor of a major series of state-wide conferences entitled Educational Options for Young Children with Special Needs. The conferences were sponsored by the Massachusetts Department of Mental Health (89-313 grant) in collaboration with the Eliot-Pearson Children's School. The conference was designed to assist the Department of Mental Health in the transfer of the Community Clinical Nursery Schools to the State Department of Education.

Since 1957, the Department of Mental Health (DMH) sponsored Community Clinical Nursery Schools for special needs children, ages three to seven. More than five hundred children were served in these schools in 1976-77. As of June, 1977 the educational responsibility for these children was assumed by the local public schools. Educational Options for Young Children with Special Needs afforded an opportunity for DMH, the public schools and others engaged in preschool education to examine the educational requirements of the preschooler and to consider the best ways to serve these children. Representatives of parent groups, day care centers, Head Start centers, private nursery schools, and public schools, joined experienced public and private school personnel and DMH teachers in discussing these issues and examining the methods and materials of pilot programs.

The conferences were held at four sites throughout the state of Massachusetts including Tufts University. More than five hundred parents, teachers and other professionals attended the conferences. Each workshop/conference day included a keynote address and two presentations of pilot programs. Dr. Samuel Meisels, LINC Project Director, gave one of these presentations. His talk focussed on the Children's School and included a showing of the slide-tape, "Teachers Talk About Mainstreaming." In the afternoon six two-hour workshops were presented. Two of the workshops were given by LINC staff-members. One was designed to aid administrators in public school systems, private preschools, Head Start and daycare facilities to provide inservice training for their own staff around issues involved in mainstreaming. A second workshop dealt with the adaptation of curriculum materials in integrated classrooms. In general, the conferences were very well-received. Evaluation summaries indicated that the LINC presentations were considered among the best in each conference.

November, 1977: Three workshops were held for New England Symposia For Children. They were conducted by LINC's Dissemination Coordinator. The Workshop foci included Consultation Strategies, Inservice Training in Mainstreaming and Parent Support. The Children's School demonstration model and Project LINC dissemination activities were discussed. Two Project slidetapes: "Teachers Talk About Mainstreaming" and "Parents Talk About Mainstreaming" were included in these workshops. The audience included administrators and teachers from public schools, Head Start and daycare centers as well as parents. Conference evaluations indicated the Workshops were very well received.

February, 1978: A workshop for teachers in Head Start (Cambridge, Massachusetts) was conducted by Head Teacher Arthur Sills. The focus was Mainstreaming Awareness and the slidetape, "Teachers Talk About Mainstreaming" was shown.

February, 1978: Malden Public Schools Title I Project Workshop on Mainstreaming was conducted by Dissemination Assistant Rose Shapiro. The workshop was well received.

March, 1978: Two workshop presentations were made at a State Conference on Early Childhood Special Education in Machias, Maine. Special Needs Resource Teacher Sarah Fujiwara led a workshop on curriculum adaptation for the Mainstream Classroom and also a workshop focusing on individualized planning.

March, 1978: LINC Dissemination Coordinator contributed to a conference for second and third year First Chance projects sponsored by the Technical Assistance Development Service (TADS) of the University of North Carolina. The three day conference in Annapolis, Maryland had as its focus issues in dissemination for second and third year projects. LINC's contribution focused on identifying audiences and developing appropriate training. The conference was repreated in April, 1978 in East Lansing, Michigan for the second group of projects. Project LINC contributed to this conference as well.

March, 1978: Special Needs Resource Teacher, Sarah Fujiwara led two workshops for Massachusetts Head Start which focused on informal assessment procedures for the mainstreamed classroom. Participants included Head Start teachers, Educational Coordinators, and Handicap Coordinators.

March, 1978: Project LINC Director, Samuel Meisels, participated in a small-group consultation meeting held at TADS headquarters in Chapel-Hill, North Carolina. The topic was "Program Evaluation." Dr. Meisels presented a lecture concerning the assessment of individual child progress in demonstration programs. The evaluation strategy in use at the Children's School was discussed and analyzed.

April, 1978: In a presentation focusing on Mainstream Challenges, Dissemination Assistant Rose K. Shapiro worked with members of the Tufts New England Medical Center Department of Continuing Education.

May, 1978: Special Needs Resource Teacher, Sarah Fujiwara, led two workshops which focused on informal assessment in mainstream programs. The audience was made up of teachers, education coordinators and handicap coordinators representing Massachusetts Head Start programs. These workshops represent another facet of Project LINC involvement with Massachusetts Head Start and were organized with the Massachusetts Regional Access Project (RAP).

May, 1978: LINC Dissemination Assistant Rose K. Shapiro, conducted a workshop for educational and social service staffs of Massachusetts Associated Day Care, the workshop focused on Challenges of Mainstreaming.

(d) Regional and State Information Sharing: From 1975-1978 Project LINC has participated in several kinds of information sharing and/or planning with Regional and State agencies involved in services for young children with special educational needs.

For two years the Project has been a participating member of the Advisory Board of the New England Head Start Regional Access Project (RAP). The RAP acts as an information clearing house for Head Start projects requesting assistance developing or refining their mainstreamed programs. Throughout the second and third demonstration years, Project LINC has conducted a variety of demonstration and long term training activities as a result of RAP collaboration. From July 1976-June 1977 Project LINC conducted Demonstration Activities for six RAP-identified Head Start centers in Massachusetts: Arlington, Brockton, Brookline, Newton, Watertown and Waltham. In collaboration with the RAP, a five-town Head Start collaborative (Communities United: Arlington, Brookline, Newton, Watertown, Waltham) was identified for longterm training and support during 1976-1977 (see next section: Dissemination Training). From September 1977 - June 1978 Project LINC undertook longterm training and support with Lynn Head Start. In addition, a variety of workshops (see Section 3) were conducted for Head Start grantees in conjunction with LINC involvement with the RAP.

In 1976-78 LINC has worked closely with the Massachusetts Early Childhood Project. The Early Childhood Project is a joint project of the Massachusetts Department of Education, Division of Special Education and the Bureau of Education for Handicapped. Directed by Charlene Imhoff, the Early Childhood Project has spearheaded a number of efforts to provide inservice education for teachers and administrators involved in the education of young handicapped children. Project LINC participated over the course of 1977 with the Early Childhood Project in planning for longterm state-wide inservice training for early childhood personnel involved in mainstreaming.

LINC Project Director, Samuel J. Meisels, developed and conducted an extensive series of nine full-day regional conferences on Early Childhood Identification and Screening in 1978 that were sponsored by the Early Childhood Project. The booklet, *A Guide to Early Childhood Developmental Screening*, by Dr. Meisels, was developed as a result of these conferences (see Section 6).

(e) *Presentations:* Project LINC personnel made a number of presentations to professionals in the fields of early childhood education and special education throughout the demonstration years.

June, 1976: American Association for Mental Deficiency (Chicago, Illinois). Presentation in a session entitled, "Integrated School Environments for Young Handicapped Children: What Are They Like? How Can We Improve Them?" LINC Project Director Samuel J. Meisels discussed "Evaluating Children's Progress in Open-Structured, Mainstreamed Pre-School Programs."

October, 1976: New England Head Start Director's Conference (Burlington, Vermont). Presentation by Project Director on the LINC demonstration model with special focus on potential applications for Head Start centers.

December, 1976: Wheelock College (Boston). Project Director showed slide-tape, Teachers Talk About Mainstreaming, and discussed issues and implications of mainstream programs.

January, 1977: Northeast Learning Regional Resource Center Conference (Cambridge). A presentation focusing on pre- and in-service training for early childhood personnel was made by the Project Director and Dissemination Coordinator.

February, 1977: College of Education, Cleveland State University. The keynote address for this conference was contributed by LINC Project Director. It focused on the challenges of mainstreaming with young children.

March and April, 1977: Massachusetts Department of Mental Health and Tufts University conferences on Educational Options for Young Children with Special Needs. LINC personnel collaborated on planning, contributed two workshops and, in addition, LINC's Project Director addressed each of the four conferences on the issue of mainstreaming in a private preschool with open classrooms. The presentation focused on the demonstration model developed at the Eliot-Pearson Children's School.

April, 1977: Council for Exceptional Children National Conference (Atlanta, Georgia). Project Director was a contributor to a symposium on service and training in early childhood centers.

May, 1977: LINC Project Director delivered a presentation on the Eliot-Pearson demonstration model and showed the Project-developed slide-tape "Teachers Talk About Mainstreaming" at Crewe and Alsager College, Alsager, England. The presentation was delivered as part of a Tufts University site visit.

May and June, 1977: Massachusetts Department of Education Division of Special Education, Early Childhood Project. Conferences on Early Childhood Developmental Screening and Identification. LINC's Project Director developed these nine day-long conferences which were supported by funds from BEH (see Section 4).

June, 1977: National Association for Education of Young Children. Special conference on mainstreaming (Winston-Salem, North Carolina). The keynote speaker was LINC Project Director who discussed "First Steps in Mainstreaming." The slide-tape "Teachers Talk about Mainstreaming" was shown and the E-P demonstration model was discussed extensively.

June, 1977: TADS National Conference for State Directors of Early Childhood Implementation Grants (Madison, Wisconsin). A major address on mainstreaming by the Project Director included showing and discussing the slide-tape "Teachers Talk About Mainstreaming."

July, 1977: Presentation was made by LINC Project Director and Dissemination Coordinator at the National Teachers Corps convention in Washington, D.C. The focus of the presentation was the LINC Demonstration Model (Eliot-Pearson Children's School) and models for inservice training developed by LINC as a part of dissemination activities. The slidetape, "Teachers Talk About Mainstreaming" was used as a part of this conference presentation.

(f) Print Materials: Print materials include brochures and pamphlets describing the Project, its demonstration model and/or its service capacity. Additional print materials include papers authored by the Project Director and his colleagues.

In 1976-78 the Project developed three small brochures/pamphlets. One pamphlet describes the demonstration model and personnel. A second pamphlet describes dissemination services. The third pamphlet describes Parent-Family Participation services of the demonstration model. (See Appendix 6 for examples of each.)

A collaborative effort in print material between the Department of Mental Health, Media Resource Center and Project LINC resulted in a booklet entitled First Steps in Mainstreaming: some questions and answers written by the Project Director. This publication has received substantial state wide and national distribution. Made available in March of 1977, more than four thousand copies had been sold or distributed. As part of LINC dissemination services, three hundred-fifty copies were sent to professionals, organizations and parent groups concerned with young children with special needs. The text of the booklet was reprinted in the November, 1977 issue of Young Children. Reprints of this article distributed by National Association for the Education of Young Children (NAEYC) between February 1978 and November 1978 include United Cerebral Palsy of Pennsylvania for distribution to 600 families and Capilano College, Vancouver, British Columbia, Canada for student classroom use.

A collaborative effort in print materials between Project LINC and the Massachusetts Department of Education, Division of Special Education, Early Childhood Project has resulted in the first of a series of Early Childhood Publications under the direction of Charlene B. Imhoff, Director of the Early Childhood Project. Authored by LINC's Project Director, the field trial edition of A Guide to Early Childhood Developmental Screening has received a considerable state wide attention and use. A revised edition of this guide by Dr. Meisels will be published in November 1978 by the National Association for the Education of Young Children (NAEYC).

A book edited by LINC Project Director, Samuel J. Meisels entitled Special Education and Development: Perspectives on Young Children with Special Needs has been accepted for publication by University Park Press (Baltimore). The book represents a scholarly effort to provide perspecitve to issues related to the education of young children with special needs. Chapters have been contributed by the Project Director, Dissemination Coordinator, and Evaluation Coordinator. Tufts University faculty members contributing include: David Elkind,Chairman, Department of Child Study and Anita Olds, also of the Department of Child Study. Other chapters will be authored by Lillian Weber, George Hein, Murray Levine, Bernard Banet, Rebecca Crowin, Anthony Bryk, Peter Knobloch and Ellen Barnes. It will be published in May, 1979.

Other print materials include papers authored by the Project Director and his colleagues. Examples include "Open education and the integration of young children with special needs" (in Early Intervention and the Integration of Handicapped and Non-handicapped Children, edited by M. J. Guralnick, published by University Park Press); Piagetian implications of integrating the normal and handicapped preschool child" (Proceedings of the Sixth Interdisciplinary Conference on Piagetian Theory and the Helping Professions, University of Southern California, 1977); and with S. J. Friedland, "Mainstreaming the young emotionally disturbed child: rationale and restraints" (Behavior Disorders, May, 1978).

(g) Training Manual: A 400-page training manual, entitled Mainstream Challenges, reflects model components developed in the demonstration program at the Eliot-Pearson Children's School, Tufts University. Modifications and refinements were made during field testining in dissemination sites during the years 1976-1978.

The manual underwent extensive revision during the developmental phase described above. It has been reviewed in depth by many teachers and other early childhood professionals. The current field trial edition of the manual will be revised again based on outreach training activities (funded by Bureau of Education for the Handicapped) in the years 1978-1981.

Mainstream Challenges is designed to be used either by teachers working alone or by teachers working in conjunction with the Project. The manual is designed for teachers in regular pre-school and kindergarten classrooms working with children from three to six years of age and for trainers of these teachers.

The manual consists of six content areas of information that are inter-related and provide knowledge essential to classroom teachers engaged in implementing an integrated, developmentally-oriented classroom program. The six content areas include:

1. Mainstream challenges
2. Organizing space and groupings in the mainstream classroom
3. Adapting curriculumin the mainstream classroom
4. Informal assessment and record keeping
5. Behavior management
6. Parent participation and parent support

Each of the six content areas is a self-contained unit lasting approximately six weeks. Each contains:

1. Written reading material related to the specific content area.
2. In-class consultation materials and activities for regular (4) meetings between paired teachers or trainer and teacher.
3. Workshop materials and activities appropriate to the content area. Workshops conclude the six week content area (Topic Area) and provide the opportunity for expanding content information as well as sharing of challenge and ideas.

A copy of the field trial edition of the manual accompanies this report, or may be obtained from the Project.

(h) Media: Media included the use of slide-tapes, public television, newspapers, and newsletters of professional organizations, First Chance Projects, etc.

Media were utilized throughout the last three years for the purpose of awareness/orientation and also for training.

Three slide-tapes have been produced. The first slide-tape "Teachers Talk about Mainstreaming," has been used extensively in 1976-78. In addition to being a part of orientation visits and training strategies, the slide-tape was requested for use in both national and regional professional conference presentations made by the Project Director. Three copies of the slide-tape were purchased and more than twenty groups and individuals rented it for showing to large audiences.

The second slidetape "Parents Talk about Mainstreaming" was produced under subcontract with the Commonwealth Mental Health Foundation utilizing personnel from the Massachusetts Department of Mental Health, Media Resource Center. This slide-tape includes discussions of mainstreaming by parents of handicapped and non-handicapped children.

Slide-tape three. "Where Differences are Respected," was completed in 1978. The slide-tape focuses on the relationship between a developmental view of young children and mainstream programming. Appropriate audiences, for this slide-tape, include parents, teachers and administrators.

Project LINC and the Eliot-Pearson Demonstration Model were mentioned in a number of professional newsletters in 1977-78, including the newsletter of Project Main Stream and of the Early Childhood Project of the Education Commission of the States. Attention was also focused upon the Project Director's booklet First Steps in Mainstreaming and the slide-tape "Teachers Talk about Mainstreaming."

Two Boston-area television appearances by Project LINC Director were made in the years 1975-1977. In each case the presentation focus was the Children's School as a demonstration model for mainstreaming young handicapped children. In January, 1978 the Project Director and Dissemination Coordinator discussed the demonstration project and strategies for inservice training on a local Boston television talk show.

2. Training

Demonstration training activities developed by Project LINC for long term training had three objectives:

(1) Providing new knowledge for trainees in selected topic areas related to mainstreaming (e.g.: Individualization, space utilization, informal assessment, parent support, etc.).

(2) Developing new skills in trainees related to each topic area (e.g. how to individualize curriculum, when to evaluate progress in a child, how to handle a difficult parent conference, etc.).

(3) Creating lasting change in trainee classrooms through longterm systematic training and support strategies.

Training was preceded by an initial needs assessment reflecting both the training goals of the Project (LINC) and the particular needs of the target site. The needs assessment procedures included:

a) Site Administrator assessment of strengths and weaknesses in teacher-trainees and their classrooms;

b) Site Specialist assessment of the same areas;

c) Teacher-trainee self-report of the same areas;

d) LINC observation of classrooms and informal classroom evaluation.

LINC's longterm training and support services included training and support services to each site. Site personnel who were involved included classroom teaching staff, specialists and, in some cases, administrators.

The project deliberately chose to make longterm comprehensive training and support commitments to a few sites rather than engage in short term involvement with many sites. This strategy was selected to ensure the development of more mainstreamed classrooms capable of effectively delivering systematic educational services to young children with special needs.

Two longterm training and support populations were serviced by the Project from January-June, 1977, (sites I and II) and two sites were serviced September 1977-June 1978 (sites III and IV).

Site I: Four kindergarten teachers in three elementary schools within a large urban public school system (Somerville, Massachusetts) were trained. The four targeted teachers in Site I were selected by their individual building principals and by the school system based screening project representative responsible for in-service workshops. Identification of trainees was made prior to involvement by LINC training staff. Site I represents the only training audience for whom no pretraining screening of potential participants was made.

The Site I teachers ranged in experience from over twenty years to only three or four years of teaching. Each teacher described herself in a pretraining questionnaire as feeling comfortable with her teaching methods (for example: curriculum breadth, space organization, individualization and informal assessment techniques).

Site II: Trainees were three teachers in a five-town Head Start collaborative (Communities United). Each teacher headed the program in the identified center and taught a single class of approximately twenty children.

The three targeted teachers were selected for longterm training jointly by the Administrative Director of the collaborative, the collaborative's Educational Coordinator and Project LINC's Dissemination Coordinator. Criteria for selection included: general breadth of classroom curriculum, space organization observed degree of individualized programming and stated desire to participate in training.

All Site II teachers had been head teachers with the program for several years. Their backgrounds in early education varied. However, in pretraining interviews none of the teachers stated that she felt presently "comfortable" with her classroom (curriculum breadth, space organization, etc.).

Pretraining information from Site II's Director as well as classroom observation by Project staff yielded the following observations: curriculum fell into the arts and craft area for the most part, rationale for activities was generally lacking; informal assessment and individualization of programming was absent. In addition, all three teachers felt that mainstreaming was "a good idea" but would require much more classroom assistance and specialist support than currently available to them.

Site III: Trainees were eleven kindergarten teachers from a large urban public school system (Malden, Massachusetts). Pre-training needs assessment indicated interest in training. Very little individualization and few curriculum adaptations for integrated teaching were observed. Prior to training these teachers indicated a general awareness of what mainstreaming refers to and a desire to improve services to children. The teachers' experience ranged from more than twenty years to a first year teacher.

In Site III building principals whose kindergarten teachers were participating in training with Project LINC were included in two kinds of training procedures (described below). In general the administrators were proud of their kindergarten teachers and their abilities. They understood what mainstreaming is about and welcomed the additional teacher training. In all cases administrators were willing to participate in training for themselves as well.

Site IV: Trainees were the Head Teachers from six classrooms in an urban Head Start Center, (Lynn, Massachusetts). The teachers were a cohesive team who had worked together for a number of years. Their awareness of mainstreaming issues was good and they were eager for training. Curriculum in the classroom generally lacked multiple instructional objectives and the teachers indicated a desire to develop these specific skills.

In training sites I-IV Project LINC had two types of objectives: The first focused on Skill Training. The content areas included the following:

a) Mainstream Challenges: What are they?
Who can be mainstreamed?

b) Individualizing Curriculum: What does it mean?
How is it done?

c) Informal Assessment: Program planning and evaluation; how to use assessment information in everyday curriculum; record keeping procedures.

d) Supporting and collaborating with parents: Why do it?
How to do it.

Each content was addressed through three kinds of training experiences (see Training Procedures below).

The second goal identified for training concerned issues of social policy. The Project assumed that successful skill-training presupposed that the trainee's attitudes would be consistent with the philosophical underpinnings of mainstreaming. For example, trainees should optimally agree that it is indeed possible and also appropriate that young children with special educational needs be mainstreamed into regular classrooms. Potential trainees should also agree that handicapped youngsters (as is the case with non-handicapped peers) are composites of strengths as well as weaknesses. An additional attitudinal issue concerned the role of parents in the educational process.

Throughout training, LINC focused on providing a forum for examining attitudes and creating opportunities for positive experiences that would assist in modifying pretraining attitudes in these areas. It was hypothesized that modifications in attitude would permit skill-acquisition to take place. As a result, the teacher should feel and perform more competently in her classroom.

Three training procedures were utilized with all four sites. The first constituted written materials that posed questions and provided orienting information for a content area (e.g.: Individualization). The written materials were then discussed during each trainee's weekly one hour consultation meeting with LINC staff personnel. Amplification of the topic area was provided at monthly half-day Workshops. During the workshop, trainees discussed the content area more thoroughly and shared challenges they were meeting in their own classrooms. The Project utilized case histories in each workshop which demonstrated alternative strategies for dealing with classroom issues and provided participating teachers with opportunities to share problem solving strategies. At the end of each workshop teachers were given an individual support activity related to the workshop topic area. The activity was designed to be carried out in the teacher's classroom. These activities were later discussed with Project personnel in individual consultations. When the next content area paper was received by the teachers, the training cycle began again.

In training site III two additional training strategies were employed. The first, Administrator Seminars, was meetings with all eleven elementary building principals, and the school system Assistant Superintendent for Elementary Education. The focus of these meetings was issues in mainstreaming of particular relevance to administrators. Topics included: providing additional classroom assistance; developing interagency cooperation; support systems for parents. The seminars served to raise issues and provide a forum for discussion.

A second training strategy unique to Site III was local school meetings. Occurring regularly during the training and support periods, these meetings were attended by the building principal, participating classroom teacher, involved specialists and a LINC staff member. The focus of the meetings differed with each building. The purpose of these meetings was to identify and pursue issues of concern or importance to individual schools. Topics reflected family populations being serviced, staffing patterns within the school, etc.

Evaluations of the Project's training efforts with demonstration training sites I and II had three foci:

a) Participating teacher evaluation of Project LINC training strategies and content;

b) Change over time in participating teacher ability to use skills acquired from training;

c) Project LINC evaluation of training.

Evaluation: Sites I and II

The original 1976-77 training group size was small (seven) in these sites. In addition only 70% of the participants returned post-training evaluation materials. For these reasons only informal observations can be reported about trainee reaction to the LINC program ("a" below) and the increased ability over time of teachers to use training acquired skills ("b" below).

(a) Participating Teacher Evaluation of Training. Throughout the program trainees were asked to complete short evaluation forms after each in-class consultation and following each workshop, (see Appendix 6). Taken together, responses concerning consultation over the training period indicated this strategy was both useful and important to the trainees. Evaluation of consultation from post-training questionnaires also indicated this strategy was successful.

Participating teachers rated as "helpful" the following training elements: on-going post-workshop evaluations; papers presented prior to workshops; inclusion of both demonstration and practice in the workshops; workshop assignment carried out in classroom and discussed with consultant. The only consistent negative response received from post-workshop questionnaires focused on the length of time allotted for workshops. Participating teachers found 2-1/2-3 hours not sufficient.

Post-training questions focusing on training strategies yielded similar results: participating teachers found written materials, consultation workshops, case histories and follow-up activities to be both effective and important training strategies.

Participating teacher evaluation of program content through the post-training questionnaire indicated that teachers felt all content areas important. They indicated that sufficient information was provided in all areas except space evaluation.

(b) Change Over Time in Participating Teachers. Actual changes in teacher behaviors as a result of training indicated that all responding teachers would be individualizing curriculum in their classroom more the next year. A majority of teachers indicated that they planned to broaden their curriculum and to encourage more parent involvement. Space reorganization and use of informal assessment techniques were seen by teachers as two areas that were not affected by LINC training. The teachers generally indicated their pre-training skills in these areas were more adequate, would not change and further, "could not change because of the system they were in."

(c) Project LINC Evaluation of Training. Based on observation by LINC staff and self-report from participating teachers, it appeared that the use of three training delivery strategies (written, consultation, and workshop) was successful. Each strategy for training complemented the others. The coordination of these strategies provided a strong avenue for skill acquisition.

For example, one Site I teacher initially spoke consistently of identified children's "problems" or "handicaps." She did not spontaneously address herself to strengths. After reading the content area written material related to the dangers of a deficit orientation, this teacher showed a strong positive response to the task of identifying the strengths of children in her class. After several weeks of support for and practice in the use of strengths in the service of weaknesses this teacher began to use this approach in her classroom planning.

Evaluation of training content (based on post-training evaluation) indicated that topics such as mainstreaming, individualization skills and developing a broad-based curriculum were well received by teachers. Teachers acquired in these areas demonstrable skills which should remain over time. On the other hand the areas of parent involvement and informal assessment were seen by the teachers as not falling within the jurisdiction of their classroom. In both sites, system-wide policy about parent involvement existed. In addition, decisions about assessment were made at the administrative level. Participating teachers clearly indicated they felt bound by system policy decisions in these two areas.

On balance, LINC's longterm training of teachers in Sites I and II was successful; teachers who began by lining kindergarten desks in rows generally ended training with tables grouped by interest area. One teacher planned to develop home remediation activity suggestions to help strengthen her bond with parents.

Evaluation: Sites III and IV

Training in sites III and IV was the same as in sites I and II but included the administrator seminars discussed earlier. The four evaluation foci utilized with sites I and II were repeated in 1977-78 training (sites III & IV).

(a) Participating Teacher Evaluation of Training: Teachers in sites III and IV found the use of written materials, consultations and workshops to be effective strategies. Trainer response to selected content areas was positive. Site III teachers requested additional workshop time and more materials related to the parent support topic area. The aspect these teachers focused on was assisting single parent families. Site IV teachers also requested additional information about parent support. However, these teachers faced difficulties in encouraging parent utilization of community supports (well baby clinics, community mental health clinic, etc.) and requested mechanical help from LINC in this effort.

As a result of site III and IV requests the field trial edition of the project training manual reflects a more comprehensive focus on parent issues and provides specific techniques not included previously.

(b) Change Over Time in Participating Teachers. Actual changes in teacher behavior over the training and support periods were encouraging. Most teachers in site III were individualizing more at the close of training and were utilizing small groupings as a part of their teaching strategies. Space reorganization and the broadening of curriculum occurred to varying degrees in most site II classrooms. In several instances Site III teachers began to involve other teachers in their building in discussion of planning for individual children.

Site IV teachers all showed increases in their ability to individualize curriculum. The observation skills ofsite IV teachers showed marked improvement by the end of training as did teacher ability to utilize observations to help clarify program goals for individual children. In several cases site IV teachers were especially creative at developing informal assessment and record keeping procedures to improve their planning for children with special needs. Space reorganization and increased curriculum flexibility were visible in differing degrees in participating teacher classrooms.

(c) Project LINC Evaluation of Training. A number of gains can be sited for site III kindergarten teachers. By and large the teachers identify special needs children less frequently as "problems" and are more apt to spontaneously look for individual strengths. Most site III teachers made gains in specific content areas included in training. In all cases site III teachers demonstrated an increase in self-esteem and sense of themselves as legitimate professionals within their public school system. A result of this attitude shift in teachers was their request to be more actively involved in system inservice training plans and to have kindergarten teacher concerns reflected in those inservice topics.

Site III administrators were also involved in LINC training through administrator seminars and regularly scheduled building meetings. Administrators play a prominent role in formal and informal support for changes in teacher's classrooms. The project administrator training component in site III attempted to increase awareness of issue in mainstreaming (through administrator seminars) and to increase participation in challenges teachers face when beginning to teach a mainstream classroom (building meetings attempted to meet this objective).

Based on post-seminar written evaluations and informal assessment of building meetings it was the judgement of the Project that the administrator component of training was not nearly so successful as the teacher component. Several mitigating factors appear to have influenced this result.

1. Principals attending administrator seminars appeared to have difficulty focusing on the LINC presentation. They view the sessions as an opportunity to air issues and grievances with the system's superintendent for elementary education who was present for each session.

2. The planned focus of LINC training efforts with administrators was informational. Our strategy was to clarify issues in mainstream programming and to identify participating teacher's concerns in each building. Active participation by principals in solving problems and assisting in program change was not an expectation specified by LINC prior to training. This contributed to the principals' apparent view of themselves as participant observers in a training project that really involved their teachers and LINC. The Project assumed that concerns highlighted by teachers in building meetings would encourage administrator participation in seeking solutions to those concerns. However, groundwork for this administrative role was not clearly laid.

3. In addition to not specifying an active commitment to change on the part of principals, the Project also neglected to show how change on their part could be beneficial to the administrators. The innovation (mainstreaming) was related to the classroom and the teacher. The relationship between classroom function and building administrator policy-making was not clearly enough detailed. In other words, the principals were not oriented to consider mainstream innovations in terms of their own needs. Each of these variables has been considered in planning for following services to be delivered to this population.

Site IV teachers increased skills in a number of specified areas. First, they demonstrated improved ability to define short and longterm goals for special needs children and to look for child strengths more spontaneously. Second, teachers integrated training content related to space organization, behavior management, and informal assessment into their existing programs. Third, teachers concentrated heavily on working closely with parents and developed their skills in the area of parent support and parent participation.

On balance the 1976-78 demonstration training efforts of Project LINC have been successful. All but one site (Site I) have received considerable followup contact with the Project and sites II and III have extended the original training focus to include parents (site II) and administrators (site III).

B. Slippage in Attainment

None.

C. Spinoff Developments

Although numerous spinoffs occurred in Training Sites, as detailed above, we wish to note one spinoff of considerable significance to Project

LINC. In May, 1978 we were notified that the Project would receive support from BEH for three years of outreach activities. The abstract of LINC Outreach is included in Appendix 7.

VII. COORDINATION WITH OTHER AGENCIES

A. Accomplishments

1. Local public schools.

The School maintains active and productive links with several LEA's. Children from eight different cities have been referred to Eliot-Pearson for a mainstreamed experience. Staff from the School are available to work with local personnel and one or two School staff members attend the Core Evaluation of every Eliot-Pearson child.

2. Clinics and mental health agencies.

Many of the School's referrals come directly from clinics such as Tufts-New England Medical Center Department of Pediatrics and Department of Child Psychiatry, the Developmental Evaluation Clinic at Children's Hospital, the Cambridge-Somerville Mental Health and Retardation Center and the Cambridge Developmental Clinic. Relationships with these organizations are excellent. The Clinical Director of the Cambridge-Somerville Pre-School Unit is the consulting psychiatrist to the school.

3. State Educational Agencies.

As documented in Section VI, the Project had extensive contacts with the State Department of Education, Division of Special Education, and the State Department of Mental Health.

B. Slippages in Attainment

None

VIII. CONTINUATION

A. Accomplishments

1. Staffing and Funding

The model demonstration program at Eliot-Pearson has received a commitment of permanent continuation from Tufts University. A letter from the Dean of the Faculty of Arts and Sciences is attached. In this letter Dean Harleston indicates that he is prepared to commit the University to funding two new positions: a Special Needs Resource Teacher and an Assistant Teacher. This represents a financial commitment of approximately $18.000 plus corrolaries (16.5%) annually.

Currently, the school is staffed by personnel who fill the following positions:

Director
Associate Director
Special Needs Resource Teachers - 2 (BEH funded)
Psychiatric Consultant (part-time)
Head Teachers - 2
Assistant Teachers - (one BEH-funded)
Graduate Assistants - 3
Secretaries - 2 (one BEH-funded)

In addition, the Project is served by a full-time Dissemination Coordinator and a full-time Evaluation Coordinator. Both of these positions are completely funded by BEH.

All positions funded directly by Tufts are permanent (non-tenure) positions and will be continued. With the addition of a special needs resource teacher and another assistant teacher to the permanent staff, the school is now assured of being able to continue its mainstreaming program indefinitely.

2. Number of Children To Be Served

The Children's School is currently serving eighteen children with special needs. Next year the school will also enroll eighteen special needs children. There will be no change in age (approximately two-and-a-half to six), handicapping conditions (mixed) or severity (mild and moderate).

3. Location of Services

The mainstreamed program will continue as a regular part of the Eliot-Pearson Children's School. No changes in the program whatsoever are contemplated.

OFFICE OF THE DEAN

TUFTS UNIVERSITY

MEDFORD, MASSACHUSETTS 02155

FACULTY OF ARTS AND SCIENCES

November 15, 1977

Asst. Prof. Samuel Meisels
Department of Child Study
Eliot Pearson

Dear Sam:

Thank you for your letter of Novermber 1st , which I have reviewed with Professor Pitcher. I am pleased to advise you the the University is prepared to commit funds for the two positions you described; namely, a Special Needs Resource Teacher and one Assistant Teacher.

It should be understood that this commitment is not tied to any specific person or persons and should not be so construed. Rather, we would expect open recruiting for the positions from among appropriately qualified professionals.

Good luck with the grant proposal.

Sincerely,

Bernard W. Harleston
Dean, Faculty of Arts and Sciences

BWH:dc

cc: Professor Evelyn Pitcher

B. Slippages in Attainment

None

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MARTHA

A notice in the observation booth at the lab. school requests NO TALKING. Aside from the fact that visitor conversation might disturb the children, the silence rule seems a good idea. I don't think I will want to be distracted by whispered asides as we watch and listen to these 3-year-olds. We're in a dark area behind two layers of fine netting through which we can easily hear the children without being seen. Mainstreaming, we were told in the orientation, is a current emphasis in the program, and each class has several handicapped children in it. Already I've spotted Amy, a child with Down's Syndrome. Who else? I wonder. But suddenly it doesn't matter who else; it doesn't seem important. There's magic in the air, and I need to find out why.

My eyes travel over the physical environment. The large room has an elevated platform at one end, reached by a ladder-like stairway, and a smaller platform at the other end. In between are a large carpeted area, a good-sized house area, plus areas for water, sand, clay, and paint -- all the trappings of the well-provisioned pre-school. In the carpeted area an expensive-looking giant tinker toy is in the process of becoming some sort of giant construction. I can't give it a name, but I bet the children could. They've been there, intent and purposeful, for a good while, and I get a feeling if I asked them what it was they were making, I'd get one of those marvellous, long, unbelieving looks that kids give you when you ask a silly question.

I notice the young man working with those children. I notice he's encouraging them to do their thing, not suggesting ways to do his. That's why they're sticking, I think -- the "giant" is theirs.

Amy is in the playhouse, but house play doesn't seem to be strictly territorial in this classroom, for I notice Joanne and Jennifer high in the loft engaging in house play of a different kind. Joanne, head tossing, blond curls dancing, an I've-got-the-world-by-the-tail look in her eyes, descends the ladder.

"We need the shoes," she announces, and, followed by Jennifer, marches purposefully to the house corner. There they find just what they need, two pairs of bright, shiny, gold, Cinderella slippers, with high high heels, and at least six sizes too big for them. They grab them, no word to Amy, and make off, and this is when I first notice Martha, because Martha sees this, senses Amy's distress and moves in. Martha is the teacher in charge, our notes tell us. Amy, in distress, has crawled into a tiny private space in the playhouse.

"I don't think Amy liked what you did," says Martha firmly to Joanne and Jennifer. "You should ask if you need something from the house." Joanne and Jennifer, their spoils clutched tightly in their hands, look across silently. "You must go and talk to Amy, you've made her very unhappy." No move, just a shoe-clutching silence. Martha's arm is now firmly around Joanne's shoulders, and it propels her back to the house area and to Amy. Martha continues to reflect Amy's unhappiness back to Joanne. Joanne resists physically, but Martha insists. Jennifer, half playfully, half seriously, is trying to pull Joanne away from Martha's arm. "I see you want to rescue Joanne," says Martha. "You'd both like to be rescued, but Amy's unhappy and we have to do something about it. When we want something another child has, we should ask for it. Amy's all teary because you didn't ask, you just took it." Joanne is still now, unresisting but silent. Martha continues to put her thoughts into words that both Amy and Joanne can understand. She seems to know that both Amy and Joanne are listening. I don't hear her press for an expressed apology, even if she is hoping for it. Perhaps she's prepared to settle for a sharpened awareness instead. I think of the many times adults demand of a child, often angrily, "Say you're sorry!" What does "I'm sorry" mean to a child under those circumstances? Martha's way makes so much more sense. Soon Amy emerges, better now. I'm sure Martha's words provided the comfort she needed. And Joanne and Jennifer? No resentment there. Somewhat chastened perhaps. Certainly more aware of Amy's feelings.

The incident makes me more conscious of Martha. She talks a lot, frequently describing and reflecting back to the children her observations. She's really good with words and occasionally tosses a juicy morsel upwards to the booth, inviting us to enjoy the children as she does. There's no condescension in her words. Her 3-year-olds are engaging in serious business, and her words signal to them that she knows this. "The cup is empty and the bottle is full," she is saying to two laughing faces at the water table. "Now the cup is full and the bottle is half empty." "Now you're filling the bottle from the cup. Now the bottle is full again." So their investigations gain importance from her interest and observations, and her words help them to develop concepts of full and empty. I think of the endless arguments about the place of play in school, and the hard line that adults tend to draw between work and play. I glance again at the two laughing faces play-working with water, and I have a feeling that Martha and her children have that problem squared away!

In another part of the room I notice several children at a table. A young woman (a student, I think) is with them as they work with clay, beating, pounding, rolling, squeezing, molding -- with more vigor than artistry. I notice how aware she is of their emerging fantasies as they move from clay to "cooking," to "cookies," to "parties," to "dress up," and on and on. Her words and actions validate the children's fantasies, enriching both their language and their play. I reflect on the importance of her input. In no way does she attempt to take over and direct. I have a feeling that the children know this and welcome her into their private play, sensing the value to them of her interest.

It's near to recess time on this bright, sunny March day. Outside I see the challenging physical environment. I wonder how the morning will end. I find myself thinking of a kaleidoscope and the magical way the colors change and fall into endlessly different arrangements. There has been a kaleidoscopic quality to the morning's activities, a flow of people and events, groups forming and reforming, spontaneous interactions that seem fresh and authentic. Martha now is over by the window, sitting in the playhouse. "It's such a lovely day," she remarks, to no one in particular, "I can see the grass as well as the snow. Does anyone want to go outside for a while?" A few children respond immediately. Others are too engrossed to hear. "Now Mark is on the slide," she says, "he's having such fun. Perhaps you'd just like to smell that good air." A few more drift over to dress.

A couple of children are still engrossed with the water play, and there's Jennifer and Joanne again. They're in the house area where Martha is sitting, but her words do not persuade them. They're too busy cooking with the clay. Suddenly I am aware of the young teacher who had been working with the builders. On his way outside he stops by the playhouse. "Do you need any help?" I hear him say. Jennifer's response is immediate, startling in its frank simplicity: "We have to do it ourselves -- because it's so hard!" He nods understandingly and moves on. "We have to do it ourselves -- because it's so hard," I think.

"It's a lovely day and I'm over here talking up a storm," says Martha to one of her colleagues. But it stops there, with talking I mean. Joanne and Jennifer have important things to do inside -- so be it! "You know," says Martha to them, "today we're breaking a rule. There is a place for clay and it's not in the house, but today you are using it in the house, but just today. Sometimes we can break rules, I suppose." No reply, but again my feeling that they have heard, that they know it is a special day, that Martha has let them break a rule. Earlier in the day a confrontation -- now a special privilege. Coincidence? I wonder.

Joanne has to be one of the most take-charge 3-year-olds I've ever observed. She's organizing this great bake. Pies, cakes, cookies -- all get slammed into the stove. "Let's get babies," says Jennifer. They go over and select two dolls which they immediately undress. Jennifer finds a plastic face mask which she struggles to fit over her doll's face.

"That's for hospital guys," says Joanne firmly. Jennifer ignores her and continues to struggle. "We're in home," says Joanne.

"I'm a nurse," says Jennifer.

"Okay," says Joanne, cleverly swinging with it. "Let's play hospitals. The hospital's over here." She pulls Jennifer out of the house and into an adjacent area. "This can be the hospital. That's the house." They put both dolls on the bench. "Let's X-ray them, but you have to hold them down still." She pulls two large, arch-shaped blocks from a box and pinions her doll firmly to the bench. Jennifer follows suit. "If you have an operation," says Joanne, "they hold you down like this."

"I know," says Jennifer.

She won't forget, even if she didn't know, I think.

Suddenly Joanne snatches up her doll and soundly spanks it long and hard on its bottom; then sinking to the floor she cuddles it close, rocking slowly as she does, eyes closed. No words to explain that sudden hurting or that soulful loving. Another gem for us to store away!

In comes ~~Jean~~ Sherrie from playing outside. She bounces over to join them.

"Get out, this is a hospital! Get out, get out!"

Raised voices attract Martha's attention. "Perhaps you need a nurse in your hospital," she says.

"*We're* the nurses," Joanne replies, indignantly.

"Well, how about a social worker -- whatever she would do -- or a doctor?"

"Okay, she can be the doctor."

Martha goes off, to return seconds later with a realistic stethoscope which she drops onto Jean's lap. Jean's attention to her new vocation is absolute. She listens long and hard to each doll's belly, rolling her eyes and breathing deeply.

The arrival of Joanne's mother brings to an end this twenty minutes of pure joy for those of us behind the screen.

"Got your coughdrops, Joanne?"

"I've eaten them all."

"You have?"

"Yes, and I don't have a cough any more."

It seems to me there are many unpleasant things as well as coughs that children can lose in this room -- and many good things they can gain.

Observing Martha's classroom I become aware again of that vital balance between freedom and constraint that the skillful teacher maintains: a structure within which children feel secure enough to reach out, to accept challenges, to take risks, to investigate, to try things out, and in the process to cross new frontiers of learning, knowing that outside themselves is the protective strength of a wise and understanding adult. Thank you, Martha.

Rosemary Armington

APPENDIX 2. SAMPLE TUTORIAL REPORT

* OUTLINE OF TUTOR REPORT *

This report was written jointly by Scott's home and school tutors. The following is a breakdown of each topic discussed, with identification of the tutor who wrote about individual sections included.

Background Information

Family Constellation and Home Environment . . . . Pat

Referral Source, History of Problem, and Previous Evaluation. . . Debbie

Tutorial Information

Description of Class. . . . . Debbie

Tutorial Arrangements . . . . Debbie, Pat

Assessment of Present Functioning

Description of Child . . . . Debbie

Speech, Language, and Communication . . . . Debbie
a. Verbal Receptive
b. Verbal Expressive
c. Non Verbal

Coordination. . . . . Debbie
a. Gross motor
b. Fine motor
c. Perceptual motor

Cognitive Development and Skills. . . . . Debbie

General Behavior. . . . . Debbie
a. Solution to everyday problems
b. Self-help
c. Personal-social Development

Tutorial Experience . . . . Debbie, Pat
a. Setting
b. Goals, Methods, and Materials Used
c. Learning Style
d. Evaluation of Progress Towards Goals
e. Future Concrete Goals

Summary and Recommendations . . . . Debbie, Pat

TUTOR REPORT

Name: Scott
Address: __

Birth: 10/20/71
Age Now: 5.5 years

Report Date: 5/20/77
Tutors: Debbie Redding
Pat Cunningham
Supervisor: Sarah Fujiwara

BACKGROUND INFORMATION

Family Constellation and Home Environment:

Scott lives with his parents, , and two older siblings, Steven, age 10, and Stacey, age 7. Steven is developing normally; Scott and Stacey are both special needs students at Eliot-Pearson.

The family lives in a third-floor apartment on a quiet street. Their apartment is well kept-up and comfortable, and includes some beautiful wood furniture handmade by Mr. . Some modifications to the physical environment have been necessary due to Scott's hyperactivity; for example, the knobs on the stove have been removed so that only an adult can light the burners. The enjoy going out for dinner together, as well as taking day trips and weekend outings. Mr. shifted his work schedule from nights to days several months ago, which promises to give the family even more time together.

Referral Source, History of Problem, and Previous Evaluation:

Scott came to Eliot-Pearson in the fall of '76 upon the recommendation of Cambridge-Somerville Mental Health Center (Preschool Unit), where he had been attending summer school. During the fall semester he was tutored twice a week in school and once a week at home. A tutoring report was written in December of '76. This follow-up report (5/20/77) is submitted with the intent to discuss and expand upon Scott's development over the spring semester. Both home (Pat) and school (Debbie) observations will be referred to where pertinent.

Scott has been diagnosed as hyperactive with delayed speech and language (June '75--Cam./Som. Preschool Unit report; 11/22/76--M.G.H. report), and mentally retarded (June '76--Cam./Som. P.U.). Scott has been taking medication for his hyperactivity, in the form of 7-8 mg. of Ritalin daily. He also has a drifting left eye which seems to be functioning normally at this time, with 20/20 vision.

TUTORIAL INFORMATION

Description of Class:

Scott is in a four day mainstreamed class under the direction of Art Sills and Mags Quain. The class meets daily from 1:00-3:30 in the afternoon, with the exception of Wednesday. The class age varies between 3-4 years, with Scott as the oldest of the 20 students. There are 4 special needs children in the class.

Scott is usually transported to school by taxi. The day begins with meeting, when the children choose their first activity from a meeting box set up with materials from each area of the class. On tutoring days Scott receives a tutoring card, and chooses an activity from the box to save for his return to class. Playtime lasts between 1-1½ hours. Cleanup follows, and the children again gather together for quiet reading and music. They then go outside to play until story time, after which they go home. On days with bad weather, inside play and music is extended, with creative movement a favorite activity.

Tutorial Arrangements:

Scott is tutored at home (Pat) and in school (Debbie). In school the tutoring takes place twice a week, on Tuesday and Friday afternoons. After Scott receives his tutoring card at meeting, we go immediately to the class office to replace the card on our bulletin board and pick up the tutoring bag I have prepared. This bag contains several choices of materials for Scott to pick from once we begin our sessions. Last semester Scott was tutored either in the class office or under the structure in the room. This proved to be highly distracting, so this semester the sessions have been held in the Child Study Department testing room. Before class begins I set it up for Scott by removing any extra or tempting materials, and place the first task to be done on the table. When this activity is completed, Scott then chooses another from the tutoring bag. Sessions last anywhere from 20-45 minutes, after which we pick up and return to class. Scott usually has chosen his first class activity from the box at meeting, so he knows what is expected of him upon re-joining the class. I usually stay in the class for most or all of the remaining day, as it gives me a chance to do further work with Scott and his peers.

Home tutoring has been going on since the end of October '76. The sessions are held once a week for an hour, and include Scott, Pat, and Mrs. . Mr. took part in these sessions too, until he went on a day shift at work, in January. The materials brought to the sessions were left for a week, and the parents, usually Mrs. , used them either daily or on alternate days for 30-45 minutes. Due to an overwhelming number of duties at the end of the term (looking for schools for next year, taking Scott to be tested, etc.), Mrs. had increasing difficulty in following through with the home tutoring, and it was terminated in February.

ASSESSMENT OF PRESENT FUNCTIONING

Description of Child:

Scott is a slight, brown-eyed child with blond hair who, although older than his classmates, is of similar physical build. He is active and observant. Scott is easily distracted form individual activities if there is any visual and/or auditory stimulation going on around him. He is quite verbal, and likes to ask questions about anything that interests him. Games and singing are two of Scott's favorite activities, and he has been showing a great deal of enthusiasm in his gross motor achievements, such as somersaulting. He is a mild-mannered child, rarely aggressive, and easy to get along with.

Speech, Language, and Communication:

a. Verbal Receptive:

Scott has made strong progress in his verbal receptive skills. His attention span has increased noticeably and with this there has been an opportunity to advance both his listening and understanding abilities. A favorite activity of Scott's is music. He is quick to learn new songs and verses, responding to patterns and tempos within the music accurately. Scott gave one song, "Hush Little Baby," his own words because they sounded more appropriate to him than the way I first sang it ("Hush little baby don't you cry..." vs. the original "Hush little baby, don't say a word...")

One activity that we repeated for 3-4 weeks involved me giving verbal clues to Scott while he searched the room for 4 small paper letters I had taped onto the walls. Each session focused on a different letter of his name, with the end results being taken home for display on his bedroom door. Scott had to find the letters, "S" for example, and glue them onto a large paper "S" which I had prepared earlier. Hints as to how many more letters he needed to find, or what color letter he should try to spot next demonstrated that Scott understood and enjoyed this hide-and-seek method--he responded accurately to my verbal signals.

Scott can respond well to simple 2-part commands, but has difficulty reacting appropriately to more sophisticated ones. His knowledge of common objects and their labels is limited, which affects his ability to respond to complicated orders. He is able to sit through longer periods of time, and can listen to a story in group time with a minimum of distractability. Often Art starts the day by drawing Scott's tutoring card from the meeting box, and announcing that he has a card for "someone who's name begins with the letter 'S'." This is Scott's cue to receive his card, and he never misses it.

b. Verbal Expressive:

Scott's speech is somewhat difficult to understand. He uses incomplete sentences and talks rapidly. When speaking to other children, he often needs an adult to help translate. Like his sister Stacey, who is an influential role model for him, Scott tends to refer to himself as "me" rather than "I" when speaking--"Me open this.", "Me make Stacey something.", "Me take it home." Through word games and songs Scott is encouraged to correct this ("Do you know the Muffin Man?..Yes, I know the Muffin Man.") Games using the letters of his name ("I see a blue 'S'. Can you give me the blue 'S'?") while involving him in the repetition of proper phrases are fun, easy tasks that we often begin tutoring sessions with.

Scott enjoys music and is an eager participant in singing. His favorite songs include "Aiken Drum," "The Muffin Man, " "Jingle Bells," "Hush Little Baby," and "The Hokey-Pokey." I often bring the guitar to our sessions, and it was during one of them that Scott made up his own verse to "Hush Little Baby."

A spontaneous dramatic play session during tutoring one day led to a successful series of verbal, imaginative play-acting experiences which placed Scott in the varied roles of firefighter, ditchdigger, and lady-in-distress. Using the one-way mirror in the testing room, we acted out scenes while watching our reflections in the glass. Scott was immediately responsive to this activity and used a great deal of coherent, spontaneous language to express himself.

Scott is inclined to repeat certain activities if he is familiar with them; often this is accompanied by excited, repetitive questions or phrases like "Why?" Whenever I brought the guitar to tutoring Scott knew that it was saved for our last activity, but during the preceeding tasks he would consistantly ask if I actually had the guitar in the case, or if it was time to play it yet. Firm, easy to understand guidelines need to be established in such cases, so that his questions are answered but not allowed to dominate the entire session.

Scott can carry on a simple conversation, but cannot answer questions involving memory ("What did you do this weekend, Scott?").

Towards the latter half of the semester Scott began verbalizing feelings more. We took several walks to the ball field across the way. As we went there often were tractors and trucks working nearby. Scott was fascinated but frightened by the large, noisy vehicles. He would start to venture near them, only to run behind me with a firm "I scared" when they came closer. Scott asked many questions about them and enjoyed watching them from safe distances. Our dramatic play sessions in the tutoring room were, in part, a result of these outside experiences. They helped Scott to act out, verbalize, and become familiar with such feelings as fear and excitement.

c. Non Verbal:

This semester it has been a sub-goal of mine to help Scott verbalize his feelings and desires. He does not act out when frustrated. Often the only way one can tell he has been hurt or bullied is by actually viewing the incident itself--he will not seek adult intervention or strike back at the aggressor. He shys away from negative encounters with his peers and if, for example, another child throws sand in his face Scott will react passively, almost as though he is not aware of the act at all. At other times Scott subtly asserts himself. This is most noticeable in familiar situations, such as group time, when Scott is sharing my lap with another child. He will quietly but firmly edge the other child off my lap by pushing himself further into the middle. Encouraging him to verbalize his desire, and settling on a solution (each child sitting on a separate leg) are good models for Scott.

If he is disinterested or unable to deal with a situation Scott will "blank out" with a vacant stare and, again, needs an attentive adult to help him focus back on the activity. Physical interaction with Scott--holding his face between my hands or bodily pointing him in the appropriate direction--are helpful means of refocusing his attention.

Scott will also grab for food or drink at the snack table instead of asking to have it passed to him. Adult modeling is also beneficial here.

Coordination:

a. Gross motor:

A major goal has been to involve Scott in gross motor activities. He exhibits poor motor planning when running, kicking, and tumbling. To strengthen these skills Scott is learning to somersault, balance on a low beam, manipulate a ball with his hands and feet, and run with his hands held by his side, not flailing in the air.

Art began somersaulting activities in class, and I continued with them in tutoring sessions. Scott first learned to lie across a low board supported by 2 blocks. Gradually he tucked his head under and brought his feet over his head to complete a rough somersault. As he became more adept at this, Scott was encouraged to attempt a similar tumbling motion without the support of a board. He has been steadily improving on this. Scott also learned to balance on the board, first by kneeling and pulling himself up into a standing position, then bypassing the need to kneel and stepping up onto the board in one continuous motion. He can walk the length of the board and jump off, but he refuses to reverse directions. As he walks I instruct him to "put one foot in front of the other," which helps Scott to focus on his movements. He likes to have me count to 10 when he reaches the end, before jumping off into the "water."

With the warmer weather, Scott and I moved outside to play catch, kickball, and chase. Holding hands and facing each other, we would spin around quickly as I drew attention to the movement of his feet. He needs to be made aware of what all parts of his body are doing at a given time, so that his coordination is smooth and continuous. He enjoys fast-paced games of catch and kickball, especially when he is being chased with the ball. After such activities Scott is usually very excited, and needs an ample transition time to calm him back down.

Scott does not show any marked foot preference yet. When climbing stairs he leads with his left foot, while going down stairs he favors his right. He enjoys climbing the structures inside and outside of class, and recently mastered the rope climbing ladder attached to the outside slide.

b. Fine motor:

Scott's fine motor coordination needs improvement. He is adept at such tasks as placing pegs into peg-boards, manipulating puzzles, stringing beads, and playing games like lotto. He can handle a stapler, scissors, and tape, but awkwardly. Scott has not shown hand preference yet, so his drawing and writing skills are weak. He has difficulty tracing both freehand and inset figures. He can write only a few letters of his name (O,T, C), but is able to identify all of them. Scott can hammer and saw, but needs adult supervision as he sometimes uses materials inappropriately. He may attempt to hammer into the carpentry table or saw wood that is not secure in the vise. Scott is able to join into songs with hand movements, providing he knows the words. We often spend time in tutoring practicing "Where is Thumbkin," "This Is The Way We Wash Our Face," and several others, using the one-way mirror to reflect our movements.

c. Perceptual motor:

Through various gross and fine motor activities Scott's eye-hand and eyeOfoot coordination is reinforced. His balancing, walking on the board, and ball playing abilitites serve to strengthen these areas. Telling him to "put one foot in front of the other" when he is walking on the board is a helpful verbal cue for Scott to focus on his movement. Tossing a large rubber ball back and forth, with increasing distance between us, brings attention to Scott's eye-hand coordination. He is able to do this when the distance is short and action fast-paced. Scott has been getting lots of praise from the adults around him for his motor achievements. His pride in these accomplishments is reflected in his mounting desire to continue practicing these activities.

At cleanup time Scott is an active participant, able to match and sort materials such as blocks, and replace them in the proper spaces. Because of his undetermined handedness, Scott has difficulty with some fine motor perceptual tasks like tracing. He enjoys drawing and coloring, and in home tutoring these skills are reinforced too.

Cognitive Development and Skills:

Scott's hyperactivity and tendency to be easily distracted have made it necessary to spend a great deal of time helping him to focus on his interactions with people and materials. One method used to help increase his attention span involves a 5-minute sand glass, set up at the activity he is participating in and stressing the minimum amount of time he has to remain in that certain area (5 minutes). This reduces excessive movement between areas while at the same time forcing Scott to focus on a particular task. Within several weeks Scott adapted to this, and could remain in an area without needing the timer. The average time he can stay focuse varies between 5-15 minutes.

With this increase in attention span it was easier to work with Scott in other cognitive areas. He knows and can label a square, circle, amd triangle. He is especially competant at lotto games which call for matching geometric shapes. Scott is also familiar with all the basic colors and the letters in his name. He does not know the alphabet well enough to identify or label all the letters, but he can sing the alphabet song with the class and name many of the letters in the process. In our tutoring sessions, the hide-and-seek game with letters in his name was good for reinforcing letters and colors, as well as pre-counting skills; there were always four letters to find and the amount left on the wall after each "discovery" to figure out.

Scott has good visual discrimination. He can sort and classify objects well, applying his sense of humor to the task when he tries to fool me with mis-catagorized examples of, for instance, pictures of food and pictures of toys.

Puzzles with faces of people on them are fun tasks to do for reinforcing knowledge of body parts. These puzzles are made of rectangular cardboard strips, with each strip having a different part of the face on it. There are four such puzzles in all; a woman, man, baby, and full view of a young boy on roller skates. Scott can identify all the facial parts, although he does not always place them in proper sequence. Showing him the order that these parts come on our own faces helps to further emphasize this. Scott enjoys mixing the parts together, so that the "grandmother" would have the baby's chin, etc. We also traced the parts of Scott's body, cut out the four main parts (arms, legs, torso and head), and mounted them on the tutoring room wall.

Over the semester I have also been concerned with how Scott uses materials. As I mentioned earlier, he can handle a stapler and roll of tape appropriately, but he does not always focus on the material he is trying to staple or tape, instead he becomes preoccupied with the function of the tool. This can lead to him stapling paper that is not properly positioned under the stapler, or taping materials without making sure the two sections to be joined are both held by the tape. He will repeatedly attempt to work at the task in this way until an adult helps him to stop, examine the situation, and discusses alternative suggestions with him.

The uses and labels of common objects have been stressed for Scott too, so that he can improve his verbal skills as well as learn the proper use of materials. Prepositions like under, over, in, out, behind, and on top of are appropriately responded to by Scott if cues (pointing, designating with one's eyes, and giving verbal hints) are given as well. He can distinguish between most and least when given 2 piles to choose from, and will successfully order sizes from biggest to smallest.

General Behavior:

a. Solution to everyday problems:

When faced with a frustrating or challenging problem Scott usually attempts to deal with it by repeating familiar measures, even if these actions are unproductive. He needs an adult's supervision when such an occasion arises, so that alternatives can be discussed. Scott rarely turns to his peers for help, but he does take an interest in their actions and is willing to partake of similar activites once he has observed them. The increased attention given Scott by the different adults inside and outside of class has heightened his enthusiasm and success in various skills. A reduction of distracting materials and choices at a given area have also served to place Scott in an environment that is easy for him to deal with. As a result, he is more capable of handling small challenges and decisions. He can apply past experiences and observations to other tasks. An example of this is Scott's manipulation of materials when he decided to make a locket like the one I often wear to school. Initially I helped him to trace, cut and fold the paper he chose to use. I then asked him how he wanted to keep it shut, and after examining my necklace, he decided upon a small piece of tape, which he folded so that it could be easily peeled back to open the locket. Finally, Scott colored a picture inside, and we wrote his name on the outside as well, so that the locket was as realistic as possible.

b. Self-help:

Scott is a neat child, who's self-help skills are good. He avoids getting very messy, but does not shun activities that involve a moderate amount of messiness. Scott can wash up when he needs to, and can toilet himself when reminded by an adult to use the facilities. He rarely wets his pants in school now. He can remove and put on his own coat, and enjoys zipping the zipper if an adult has started it for him. Scott can button well too.

c. Personal-social Development:

At the beginning of the year Scott had a difficult time separating, but this situation is now under control. He still brings an object from home each day, which is usually a Snoopy doll or toy. Whatever the object, Scott knows that it must remain in his cubby until the end of class. He is agreeable to this, and there have been no problems with separation this semester.

Scott knows the names of most of his classmates, and has been increasingly able to spend time with a few of them at an activity, such as the water table, for over 7 minutes at a time. He tends to exhibit mostly parallel and solitary play, so effort is made to draw other children into activities, like cooking, where cooperative play is emphasized. Another fun thing to do is lotto, whcih helps Scott, and other children, to practice taking turns while working towards a common goal.

Our tutoring sessions were always centered around just the two of us, but upon return to class we occasionally invited one other child into the class office for a song on the guitar or to experiment with a tape recorder. Scott exhibited mild signs of possessiveness when other children demanded too much of my attention, so I made sure that the two of us did have our designated time alone each day.

Scott also needs help in self-control areas. He will impulsively scribble in a book or write and glue on a table. Much of this can be corrected by simply bringing his attention to these activities and suggesting appropriate ways to use, and not use materials. At group time Scott is also prone to speak out while another is talking, or to want to flip the pages in a book randomly as others are listening to a story. Remaining close to him and emphasizing what he needs to do ("You need to listen now, Scott. We will look at the other pictures after the story is over.") is helpful in keeping his attention properly focused.

Scott plays well in the classroom and is beginning to single out several children as favorites. He seeks Stacey's company when the two classes are out together on the play yard. Scott is usually a follower when it comes to joining and initiating activities. His speech is somewhat difficult for other children to understand, so it is helpful to have an adult nearby ready to assist and encourage his verbal interaction.

Tutorial Experiences:

a. Setting:

Tutoring sessions in school are held at the start of the day and in the same office. Variations on this occur only when the weather is nice enough to spend the time outdoors. Predictability and routine are vital. They allow Scott to feel as comfortable and in control of the situation as possible. Each session lasts about 20-45 minutes, and Scott has the option of terminating it when we have finished with our three tasks.

Home tutoring took place at the kitchen table in the home. It involved Scott, his mother, and Pat. (See Tutoring Arrangements for more details)

b. Goals, Methods, and Materials Used:

School goals for Scott this semester include fine and gross motor development, body awareness, increasing his attention span and ability to focus, use of proper pronouns and prepositions, strengthening of peer interaction, and taking turns. Within thses broad catagories are smaller sub-goals which were emphasized in individual sessions. Examples of these sub-goals include tracing shapes, the proper execution of a somersault, identifying the parts of the body, being able to remain in one area for a specific amount of time, playing word games and songs, and working in small groups doing sharing activities such as cooking and lotto.

Methods and materials used in school center around the principle that Scott needs a routinized, well-established order to his day. From the start, when he receives his tutoring card and picks up the tutoring bag, Scott knows what is expected. A single task is introduced at a time to avoid confusion. This has already been set up for him before he enters the tutoring room, and he begins with it right away. Scott is always in motion, so the activities chosen are ones which allow for freedom of movement. He enjoys manipulating materials, so for each task there is something that must be glued, stapled, or put together is some way. Raw materials like paper, glue, crayons and markers are always in the bag. I also include a game or puzzle of some sort. Each session ends with either dramatic play or the guitar. Eye-contact or gentle physical contact will bring Scott's attention back to the task at hand if he becomes distracted. Caution must be taken to remove any extraneous attractions, such as the testing room supply cabinet (I turn it around to face the wall and block the door from opening) or else Scott may find it more appealing than his tutoring activity. Modeling appropriate verbal and physical actions for him also help Scott to express himself in a meaningful way.

Goals and methods used at home for Scott fall into three catagories; improved fine motor coordination, ability to recognize some letters, and improved language skills.

To improve Scott's fine motor ability, manipulative materials such as peg-board and pegs, Constructo-straws, shape and object tracing, and stringing beads were used.

For learning letter recognition, we began with shape matching and naming, then progressed to sorting, matching, and naming the letters of Scott's name. We used sandpaper cut-outs of letters, matching plastic letters to outlines, sorting letters into boxes, touching a letter and finding it's match, tracing a stencil of Scott's name, sequencing plastic letters in Scott's name, and printing letter shapes with paint and play-dough.

Under language skills, we began with naming objects, using games like lotto. We then moved on to learning verbs of action, again using lotto, and a set of photographs, "Faces of Children." We also began work on prepositions--on, in, beside, behind, in front of, and under--using games which required Scott to place or locate objects according to verbal instructions. Finally, in coordination with Scott's school tutor (Debbie), we began encouraging and reinforcing the use of "I" as subject instead of "me." His mother also exposed Scott to language experiences such as taking him on walks, or weekend trips, and talking about them. She also reads to him frequently.

c. Learning Style:

Scott functions best in an uncluttered, simplified setting. He will repeat a task over and over (see use of materials under Cognitive Development) unless guided differently. He also, because of his hyperactivity, may move from activity to activity in a haphazard fashion, and needs to be limited in some way, with the sand glass timer for example. He seems to be happiest when in a one-to-one relationship with an adult, and does not hesitate to ask for help. This semester he has become more proficient in several areas, gross motor and group participation for instance, and he tends to show greater enthusiasm in repeating these skills.

At home, Scott learns best with activities which are short, visually interesting, fairly self-explanatory, and involving him physically. When tutoring occurs at home Scott is not usually visibly distractible, although he may be auditorily distracted by outside noises. He is generally interested in the material and enjoys tutoring. He is able to sit at the table for about 30 minutes.

d. Evaluation of Progress Towards Goals:

Scott has made visible achievements in gross motor, cognitive, and social skills. This is largely due to efforts made to improve his overall attention span and focusing ability. With these accomplishments it was easier and more rewarding to work on the basic skills mentioned above. This semester seems to have been very short and broken up with many vacations, so some valuable time was lost along the way. Yet Scott seems to have emerged from this term a very happy, more competent child, which is the most important outcome of our time together. All of these skill areas need continued reinforcement, especially his language skills. Having input from the home and class tutors, as well as the Eliot-Pearson staff and his parents, has enabled Scott to receive consistent attention and praise for his efforts. This in itself is a major reason for the progress reflected in Scott's behavior.

In home tutoring Scott showed a preference for fine motor activities, and could sit filling a peg-board with pegs three or four times in succession without being bored. He can now trace a recognizable shape from an inset, obviously attempting to follow the contours, where before this was largely uncontrolled and unplanned motion. Scott can now match and sort all the letters in his name, as well as some others (A,B,E,D). He can place the letters in his name in the proper sequence. He can recognize his name as well as some others (Barbara, Al, Stacey, Steven, Mags , and Art). He can usually--75% of the time--correctly name S,C,O,T, and A.

Scott can correctly identify a large number of common objects. He can identify familiar actions, such as jumping, running, eating, and cooking. He can follow prepositioned commands correctly 50% of the time. Scott also knows to replace "me" with "I" when challenged, but still rarely uses "I" spontaneously.

e. Future Concrete Goals:

Scott's school progress adequately reflects a need for continued reinforcement and support in all areas mentioned above. He is becoming more confident socially, and with the thought in mind that he will be switching schools after the summer, I recommend that his language and social skills remain a priority. Scott needs a good deal of fine motor practice, especially in tracing and similar pre-writing exercises. A follow through on dramatic play and singing will further reinforce the progress Scott has made in his verbal expressive abilities. Emphasis on verbalizing his feelings is needed too, as that area was not fully developed this semester. Outside play this summer will be perfect for continued gross motor activities, which Scott seems to enjoy and rely on for releasing energy.

Goals that have emerged from home tutoring and should be stressed in the future include letter recognition and motor planning. Perhaps Scott could learn one or two favorite words and the letters in them. Following an obstacle course would help develop gross motor planning. He should use language experiences such as talking into a tape recorder, or dictating stories, to share experiences and relate them verbally.

Summary and Recommendations:

This has been a very good semester for Scott, as he has had a great deal of attention, praise and reinforcement from concerned adults around him. Scott functions well in a mainstreamed class if care is taken to provide him with a suitable environment. By suitable I mean a setting that is minimally distracting, both visually and auditorally. In the tutoring room for example, I draw the shades over the mirror until we are going to use it. Only one task is visible at a time, and the door is shut to keep out unnecessary noise. Scott looks forward to each tutoring session. His enthusiasm is vital if he is to enjoy and benefit from these learning experiences.

Home tutoring is a valuable and enjoyable experience for Scott. If family dynamics allow for it, Mrs. should continue to work with Scott, using her own good understanding of Scott's strengths and deficits, and her own good ideas for activities, as well as the skills she has learned this year.

In conclusion, Scott needs to continue on a multi-instructive program plan if possible. His verbal, motor, cognitive and social skills are improving gradually, but must be consistently reinforced in the future to assure steady development.

APPENDIX 3. PARENT QUESTIONNAIRES

TUFTS UNIVERSITY

Eliot-Pearson Children's School
Under the direction of Eliot-Pearson
Department of Child Study

April 4. 1978

Dear Parent.

As part of our final phase of evaluation for our mainstreaming program this year. we are requesting that every parent fill out the enclosed questionnaire. The purpose of this form is to gain a better understanding of parental attitudes concerning the mainstream process. particularly as it has been experienced at Eliot-Pearson this past year. Your participation and cooperation is necessary so that we have an accurate representation of the effects of this program. Please return the questionnaire to the school office by May 1. Thank you for your help and your cooperation.

Sincerely.

Sam Meisels

Samuel J. Meisels. Ed.D.
Director

Medford, Massachusetts 02155

ELIOT-PEARSON CHILDREN'S SCHOOL
Tufts University
105 College Avenue
Medford, Mass. 02155
628-5000 X 294

Parent Questionnaire on Mainstreaming

1. Today's Date ______________________________
2. Child's Name*______________________________
3. Name of person filling out this questionnaire*______________________
4. How old is your child?______________________
5. How many years has your child attended this school?_________________
6. Approximately how many times have you observed your child's class this year?______________________________
7. How many times have you been a parent-helper in your child's classroom this year?____________________________
8. Has your child participated in any other programs this past year? Please list (examples: physical therapy, gymnastics, play group)

   ____

   ____

   ____

(There is room on the final page for additional comments)

* We are asking you to indicate your child's name and your name in order for us to know who has or has not completed a questionnaire. After you have turned in the questionnaire, relevant information will be coded and this identifying cover sheet will be discarded. Your right to confidentiality and anonymity will be respected.

PARENT QUESTIONNAIRE
ON MAINSTREAMING

Instructions: For each statement, circle one of the five responses.

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I. Attitudes About Mainstreaming					
1. I think that it is a good idea to integrate or mainstream children with special needs into regular pre-school classes.	SA	A	N	D	SD
2. I feel more positive about mainstreaming as a result of my child's experience in the program this year.	SA	A	N	D	SD
3. I was unfamiliar with the concept of mainstreaming before I applied to this school.	SA	A	N	D	SD
4. Even now I do not feel that I know very much about mainstreaming.	SA	A	N	D	SD
5. I think there is no reason for schools to be involved in mainstreaming except to comply with the law.	SA	A	N	D	SD
6. I think that mainstreaming places too many demands on teachers.	SA	A	N	D	SD
7. I feel that even children with severe mental, physical, and/or emotional handicaps should have an opportunity to participate in regular school programs.	SA	A	N	D	SD

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
8. I think that mainstreaming does not alter the quality of education available in a classroom.	SA	A	N	D	SD
9. If I had it to do over, I would choose a mainstreamed program for my child.	SA	A	N	D	SD
10. I think that mainstreaming promotes an understanding of what it is like to have a handicap in children who do not have handicaps.	SA	A	N	D	SD
11. I believe that children will grow up with an increased appreciation of differences among people as a result of this kind of school experience.	SA	A	N	D	SD
II. Attitudes About The Effects of Mainstreaming On One's Own Child					
12. My child's mental, physical, and emotional development has increased even more than I expected as a result of being in the program this year.	SA	A	N	D	SD
13. I feel that the teachers have adapted the program to meet my child's needs.	SA	A	N	D	SD
14. I believe that my child's interest in finding out about the world and exploring new things has increased this year.	SA	A	N	D	SD
15. I think that my child's overall mental abilities (for example problem-solving skills, knowledge of cause and effect, ability to express oneself in language) have increased this year.	SA	A	N	D	SD

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
16. I am concerned that my child is not getting all the skills that he/she needs to succeed in school once he/she leaves here.	SA	A	N	D	SD
17. I feel that my child's teacher is not distributing his/her time fairly among all of the children as a result of the mainstreamed program.	SA	A	N	D	SD
18. I feel that my child's capacity for self-understanding has increased this year.	SA	A	N	D	SD
19. I believe that my child has become more self-directed this year.	SA	A	N	D	SD
20. I feel that my child thinks of himself/herself as being very different from the other children in the class.	SA	A	N	D	SD
21. I feel that my child has not profited from sharing a classroom with children who are different from him/her.	SA	A	N	D	SD
22. I think that my child has learned more about himself/herself as a result of contact with children who are different from him/her.	SA	A	N	D	SD
23. I feel that my child's experience at school has been generally a happy one.	SA	A	N	D	SD
24. I think that there are enough materials and activities in the classroom to challenge every child.	SA	A	N	D	SD
25. I believe that my child is receiving enough individual attention at school.	SA	A	N	D	SD

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
26. I feel that my child has received as good an experience this year in a mainstreamed program as he/she would have received in a non-mainstreamed program.					
27. I feel that my child has received a better experience this year in a mainstreamed program than he/she would have received in a non-mainstreamed program.					
III. Attitudes About Oneself As A Result of The Mainstreamed Program					
28. Having my child in this school has helped me become more comfortable with children who are very different from my own child.					
29. Having my child in the school this year has helped me get a better idea of his/her strengths and weaknesses.					
30. I have a reasonably good idea of what my child's capabilities will be 10 years from now.					
31. Having my child in this school has given me increased confidence about his/her future.					
32. Having my child in school this year has helped me learn how to handle him/her when he/she gets angry, stubborn, wild, mad, sad, etc.					
33. I do not think of my child as being very different overall from the other children in the class.					

	Strongly Agree	Agree	Neither Agree nor Disagree	Strongly Disagree	
34. In general, I feel that the similarities outweigh the differences among all the children in my child's classroom.					
35. The experience my child has had in school this year has not made me feel better about myself as a parent.					
36. I feel that there is someone at school to whom I can turn when I am confused or when I have questions about my child.					

Please use this space (and reverse side if needed) for any additional comments you wish to make:

The questions in the next section are included to help us better understand how our mainstream program has serviced both parents and children.

1. Did you talk to your child about the special needs children in his/her classroom this year?

   Yes NO

2. If there was a discussion, when was the first time you remember talking to your child?

   Before school started ____
   Early Fall ____
   Mid Year ____
   Recently ____

3. As the year has progressed, has your child commented on the special needs children in the class?

   Once/week Once/month Once/semester Never

   Give Examples:

4. If s/he had questions, were you able to answer them?

   Yes No

5. Did you have your own questions about mainstreaming?

   Yes No

6. Did you get your questions answered?

Yes No Doesn't apply

Give Examples of Questions:

7. If so, what was your source of information to answer these questions?

Classroom teacher_____

Special needs teacher _____

Administrator _____

Other parents _____

Class meetings _____

Special group meetings _____

Booklet received in in mail in Sept. _____

No source _____

Other (please list) _____

8. What was particularly helpful to you this year in understanding mainstreaming?

9. What would you like to be done differently?

TUFTS UNIVERSITY

Eliot-Pearson Children's School
Under the direction of Eliot-Pearson
Department of Child Study

April 8, 1978

Dear ______________________________:

Since your child left Eliot-Pearson we have been continuing our program of integrating, or mainstreaming, special needs children into all of our classrooms. This year the Federal grant that enabled us to begin the mainstreaming program comes to an end. Fortunately, Tufts has committed itself to adding two new staff positions, so we will be able to continue to mainstream.

At this point I am in the process of compiling a final report for the U.S. Bureau of Education for the Handicappped and for Tufts University. I need your help to complete the report by filling out the enclosed questionnaire. The questionnaire is designed to find out what kinds of educational experiences your child has had since leaving Eliot-Pearson and how your child has generally been developing since then. It also asks you to comment on your impressions of the Eliot-Pearson experience in general. The information you share will be important in helping us to evaluate our program and to make necessary changes for the future.

Thank you for your help and cooperation. Please call me if there are any questions. I would like you to try to return the questionnaire by May 1.

Sincerely,

Samuel J. Meisels, Ed.D.
Director

SJM/srl

Medford, Massachusetts 02155
617 628-5000

Eliot-Pearson Children's School
Tufts University
Medford, Mass. 02155

Child's Name______________________________ Date______________

Name of individual filling out this form______________________________

1. Child's educational experience after leaving Eliot-Pearson:

	1976-77	1977-78
School Name		
Town		
Public/Private		
Grade/Class		
Teacher Name		

2. Type of program child participated in: (please check)

	1976-77	1977-78
Private or Public School:		
Regular class, no special services	☐	☐
Regular class with changes within regular classroom	☐	☐
Regular class with special services outside classroom more than 1½ hours per day	☐	☐
Regular class with special services outside of class for ½ day each day	☐	☐
Separate program/class	☐	☐
Transition class	☐	☐

3. Special school services provided for your child: (please check)

	1976-77	1977-78
Specialists:		
Reading		
Learning Disabilities		
Speech/Language		
School Guidance/Psychologist		
Physical/Occupational Therapist		
Tutor (specify)		
Classroom Aide		
Small Group:		
in Regular Class		
in Separate Class		

4. If your child is presently in a private school. are there plans to have him/her enter public school?

Yes No Doesn't apply

If so. when?

As a Result of THE ELIOT-PEARSON PROGRAM

Please circle one response for each statement.

	Strongly Agree	Agree	Disagree	Strongly Disagree
5. I know better what to expect from my child in his/her skill abilities.	SA	A	D	SD
6. I know better what to expect from my child in his/her social-emotional development.	SA	A	D	SD
7. I understand more about how to manage my child at home.	SA	A	D	SD
8. I understand my child's individual needs better.	SA	A	D	SD
9. I know how to further help my child in understanding his/her needs.	SA	A	D	SD
10. I understand more about my child's handicap, my child's strengths and limitations.	SA	A	D	SD
11. I understand the rationale for mainstreaming.	SA	A	D	SD
12. My child's self-image improved.	SA	A	D	SD
13. Teachers cared about my child and adapted the educational program to meet his/her needs.	SA	A	D	SD
14. I felt better about being the parent of a handicapped child.	SA	A	D	SD

SINCE LEAVING ELIOT-PEARSON:

	Strongly Agree	Agree	Disagree	Strongly Disagree
15. I think my child has improved in his/her overall cognitive abilities (example: problem-solving skills, knowledge of cause-effect).	SA	A	D	SD
16. I believe my child has made progress in learning to read (example: knows letter sounds, reads simple words).	SA	A	D	SD
17. I believe my child has improved in the area of arithmetic (example: simple addition, counting beyond 20).	SA	A	D	SD
18. I feel my child has made progress in writing skills (example: writing single letters, writing simple words).	SA	A	D	SD
19. I believe my child has improved in his/her fine motor development (example: using scissors, buttoning shirt).	SA	A	D	SD
20. My child's overall physical development has increased (example: riding a bike, throwing/catching a ball).	SA	A	D	SD
21. I feel my child has increased in his/her ability to develop friendships with children in school.	SA	A	D	SD
22. My child likes going to school.	SA	A	D	SD
23. My child seems to feel good about him/herself when in school.	SA	A	D	SD
24. My child has made continued progress in learning socially appropriate behavior.	SA	A	D	SD
25. My child's attention span seems to be improving (example: plays with a game for longer periods of time than before).	SA	A	D	SD

SINCE LEAVING ELIOT-PEARSON:	Strongly Agree	Agree	Disagree	Strongly Disagree
26. I feel that the teachers have adapted the program to meet my child's needs.	SA	A	D	SD
27. My child's school experience has generally been a good one.	SA	A	D	SD
28. My child's present teacher(s) keep me well informed of my child's school life.	SA	A	D	SD
29. I feel comfortable talking to my child's present teacher(s) about home and school issues involving my child.	SA	A	D	SD

30. Do you feel your child's experience at Eliot-Pearson was a good foundation for providing skills (social, cognitive, physical) to prepare him/her for his/her next phase of education?

31. Discuss the strengths of the mainstreaming program at Eliot-Pearson.

32. Discuss the weaknesses of the mainstreaming program at Eliot-Pearson.

33. What would you like to see changed in the Eliot-Pearson program?

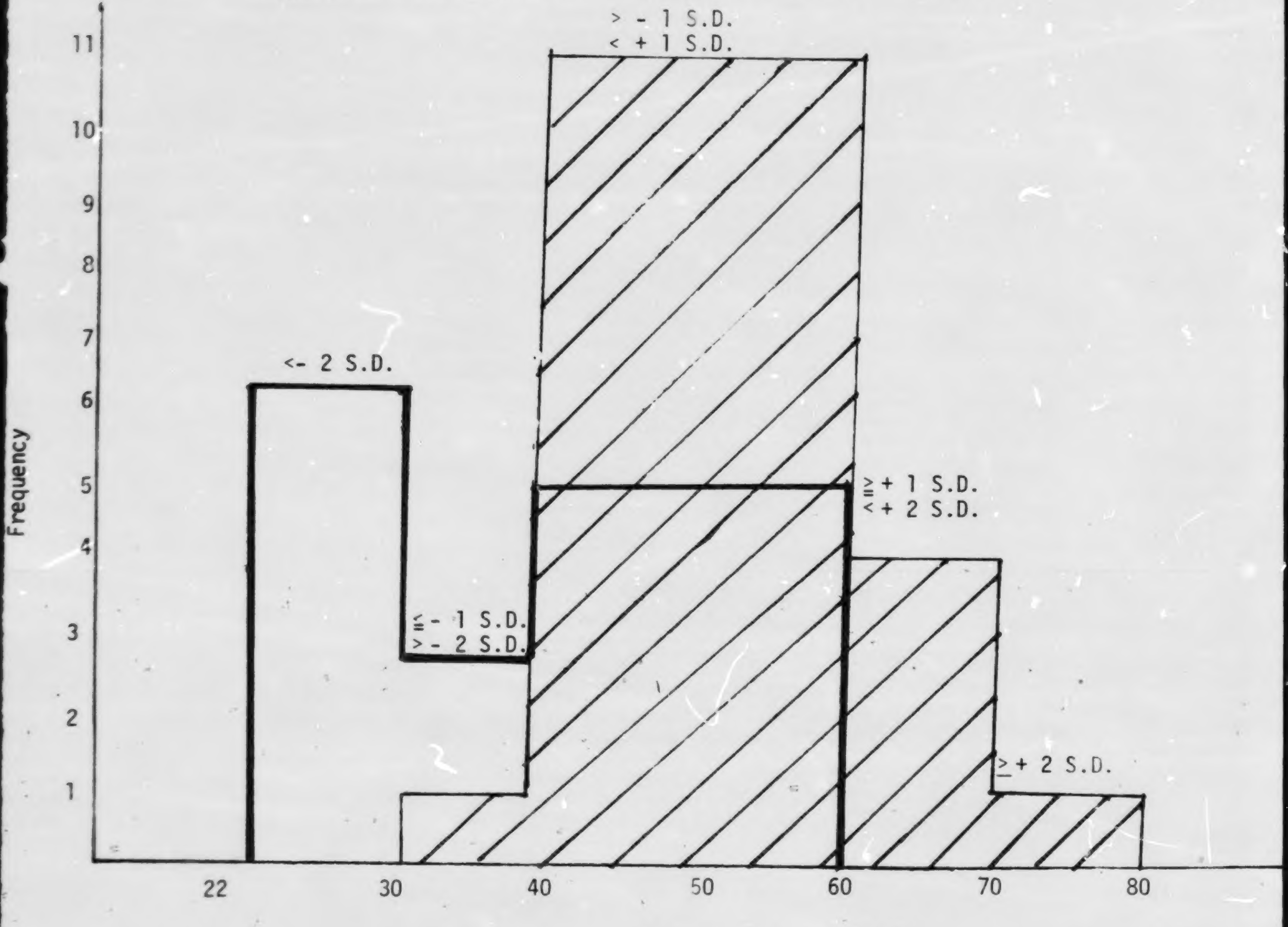
34. Would you send your child to Eliot-Pearson if you had the opportunity to do it over?

Yes No Maybe

Please explain:

Appendix 4. Figures Relating to Assessment of Children's Progress

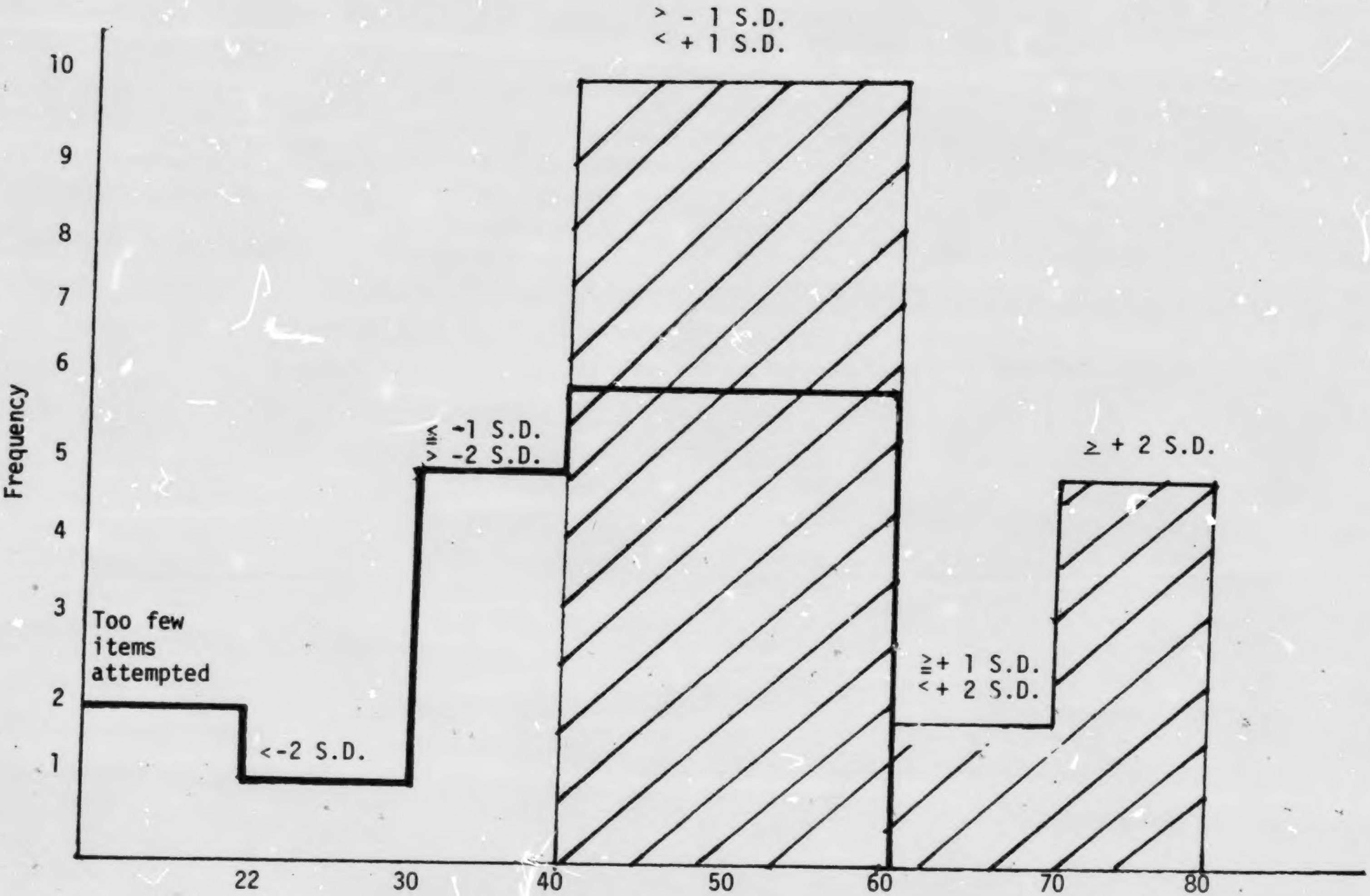
Figure 1. Distribution of MSCA Verbal Index Pre-Test Scores



SCALE INDEX

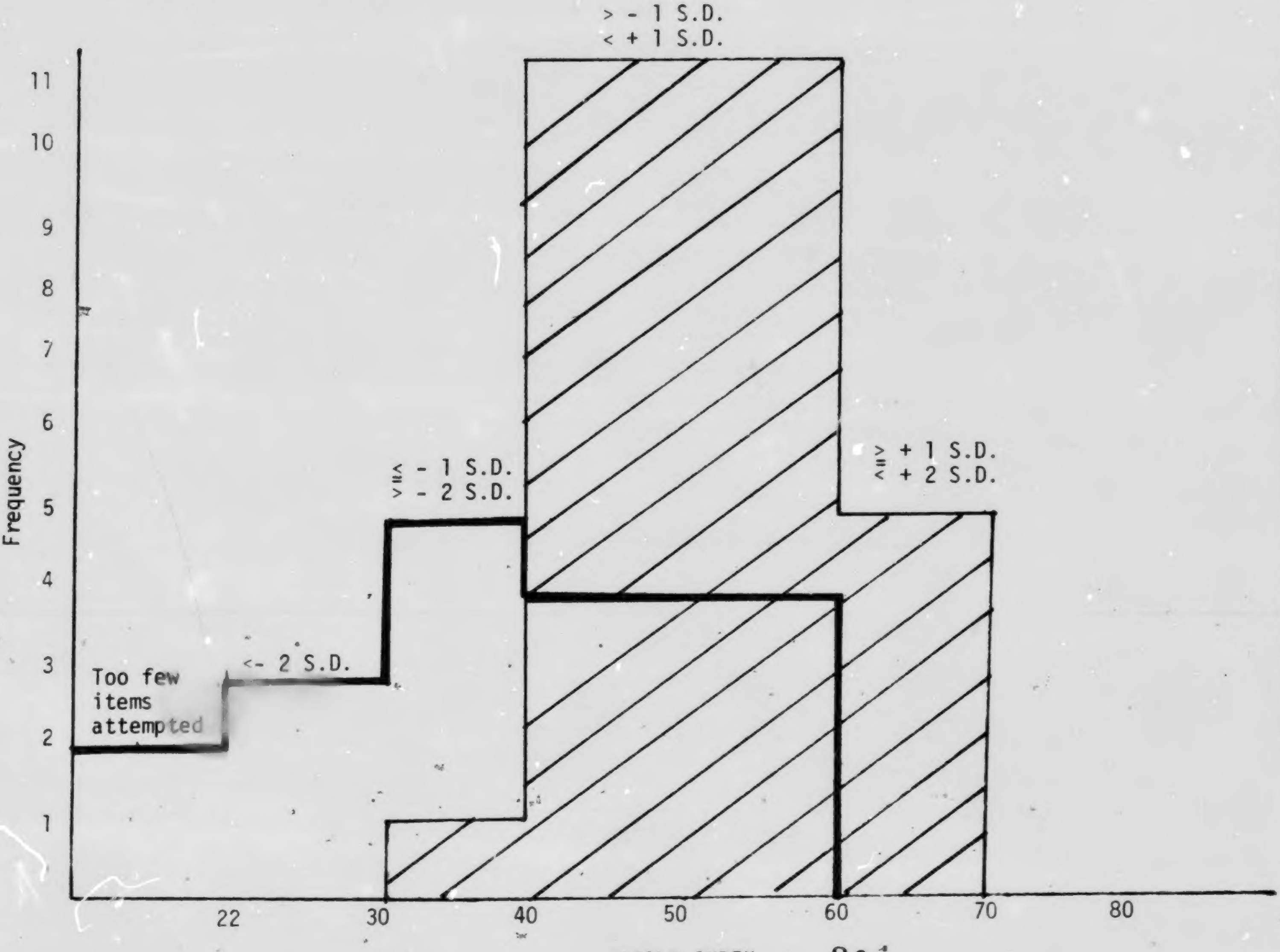
(Heavy lines denote Special Needs; Diagonals denote Non-Special Needs)

Figure 1a. Distribution of MSCA Verbal Index Post-Test Scores



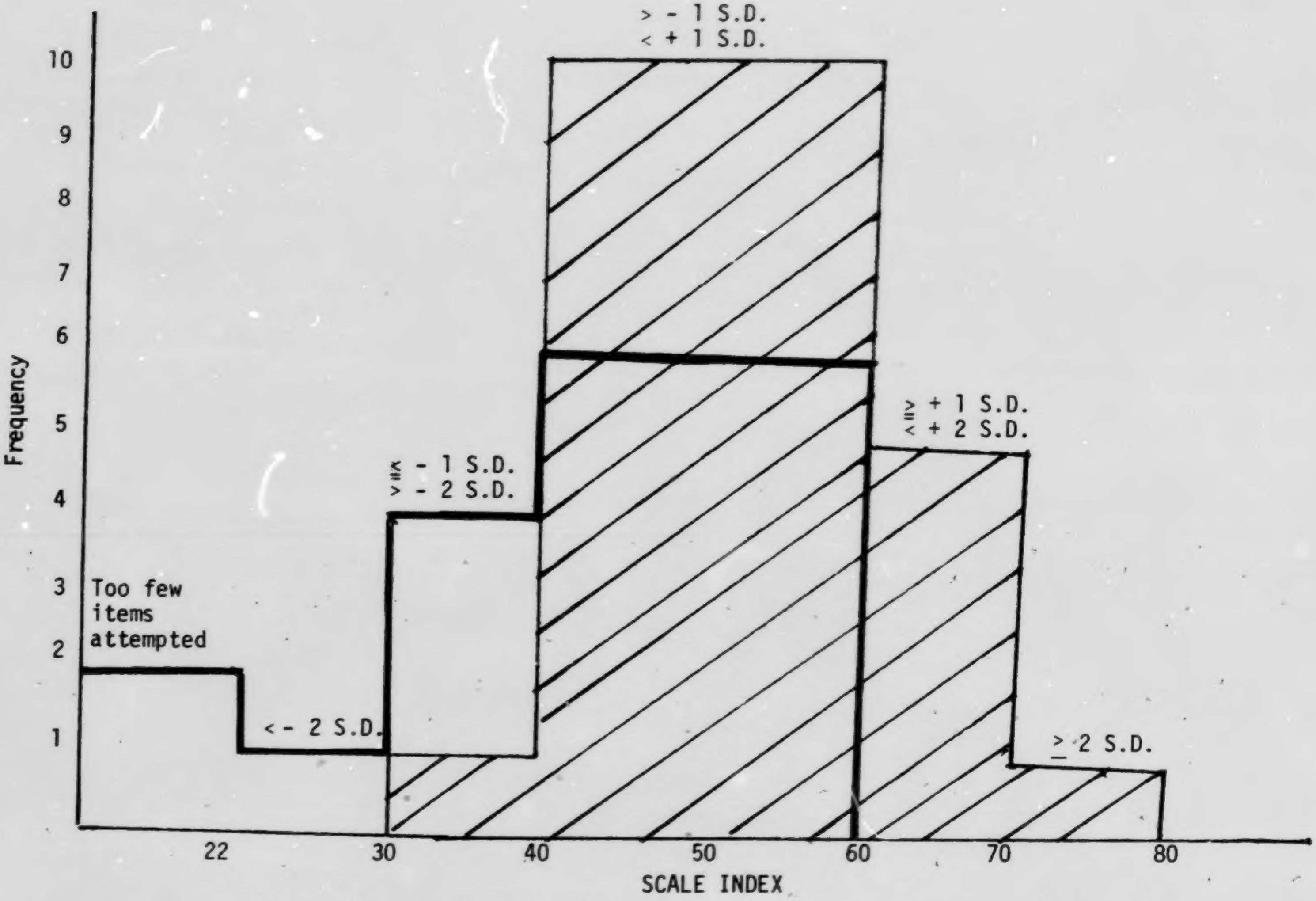
SCALE INDEX
(Heavy lines indicate Special Needs; Diagonals denote Non-Special Needs)

Figure 2. Distribution of MSCA Perceptual-Performance Index Pre-Test Scores



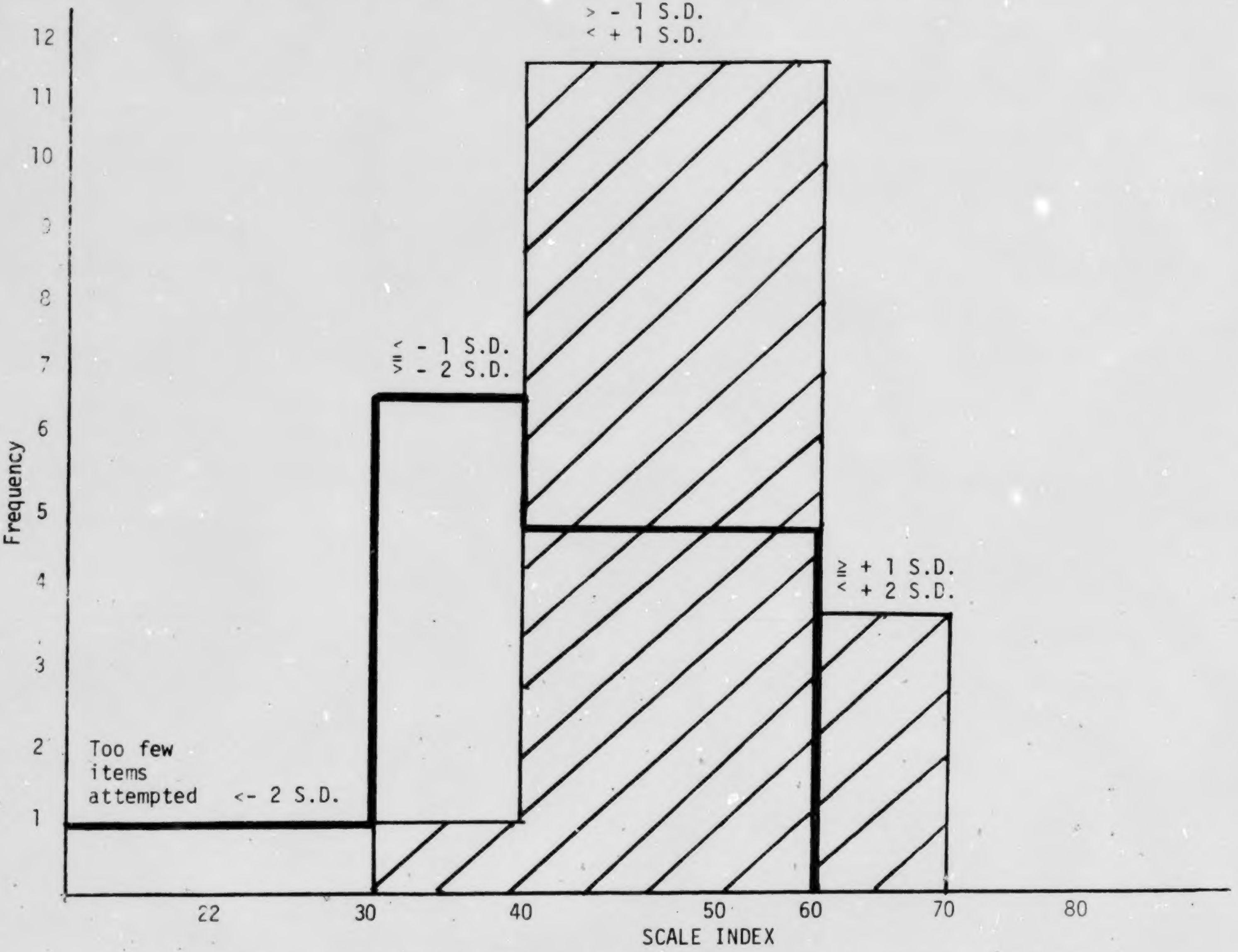
(Heavy lines denote Special Needs; Diagnoals denote Non-Special Needs)

Figure 2a. Distribution of MSCA Perceptual-Performance Index Post-Test Scores



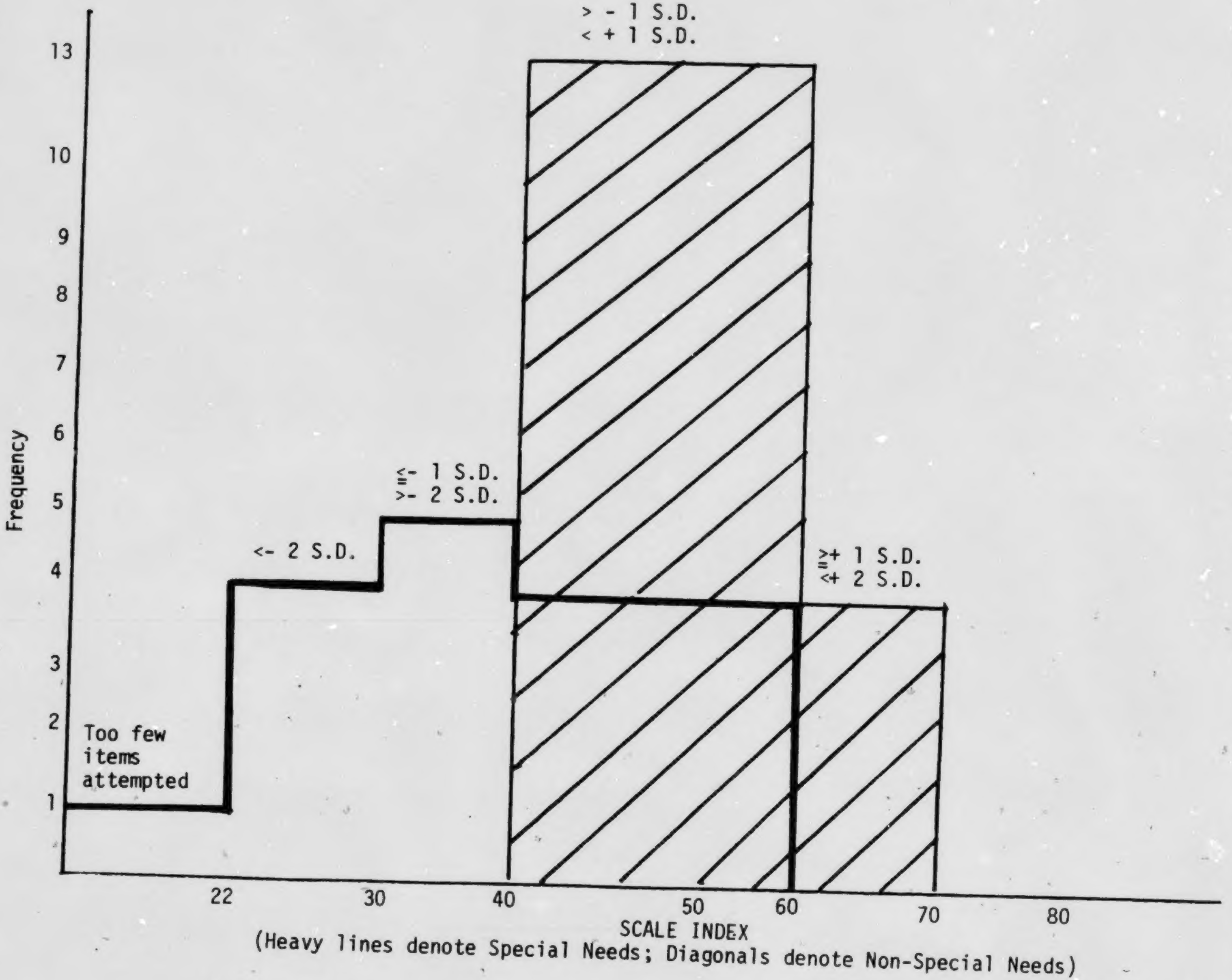
(Heavy lines denote Special Needs; Diagonals denote Non-Special Needs)

Figure 3. Distribution of MSCA Quantitative Index Pre-Test Scores



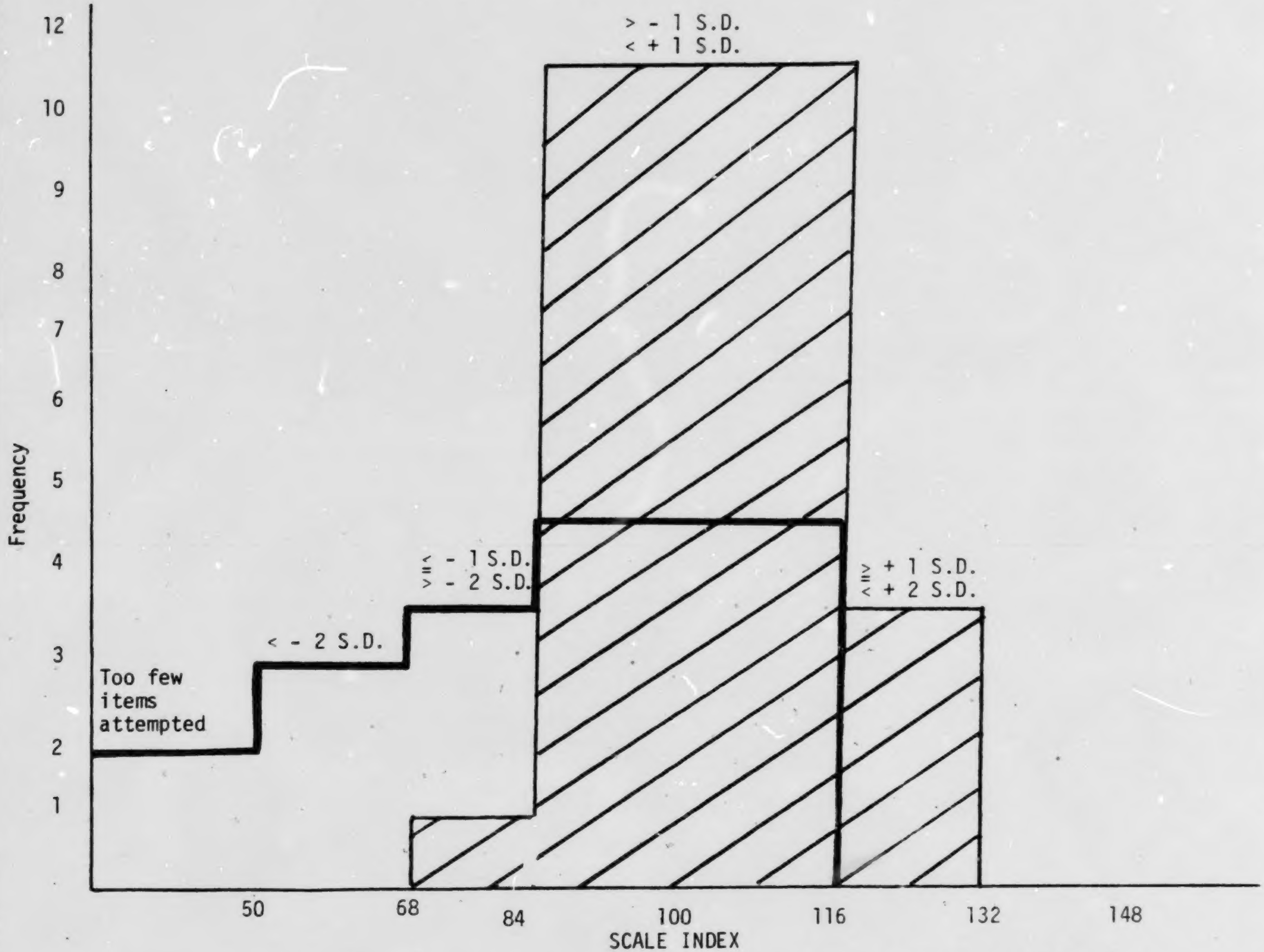
(Heavy lines denote Special Needs; Diagonals denote Non-Special Needs)

Figure 3a. Distribution of MSCA Quantitative Index Post-Test Scores



(Heavy lines denote Special Needs; Diagonals denote Non-Special Needs)

Figure 4. Distribution of MSCA General Cognitive Index Pre-Test Scores



(Heavy lines denote Special Needs; Diagonals denote Non-Special Needs)

Figure 4a. Distribution of MSCA General Cognitive Index Post-Test Scores

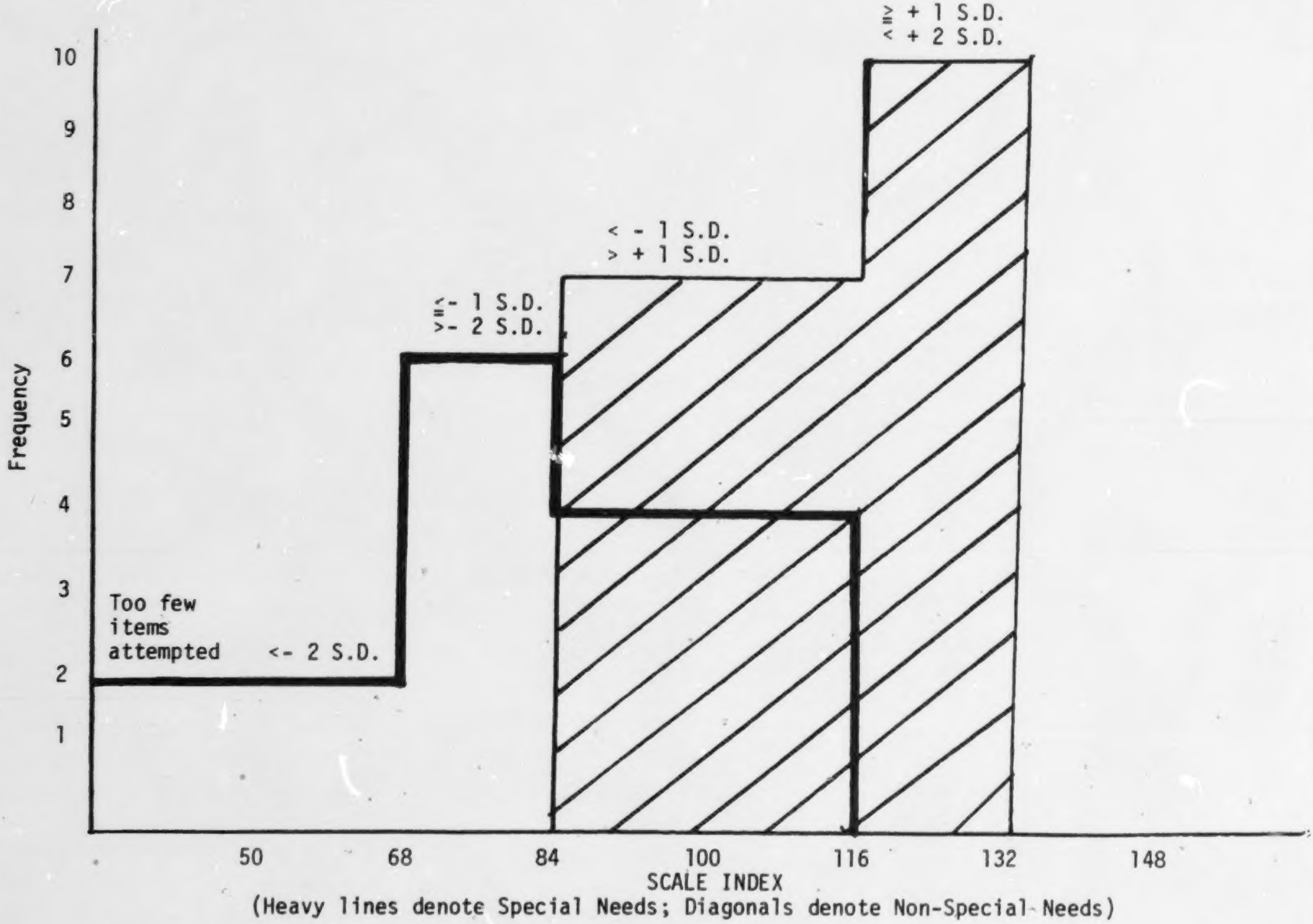
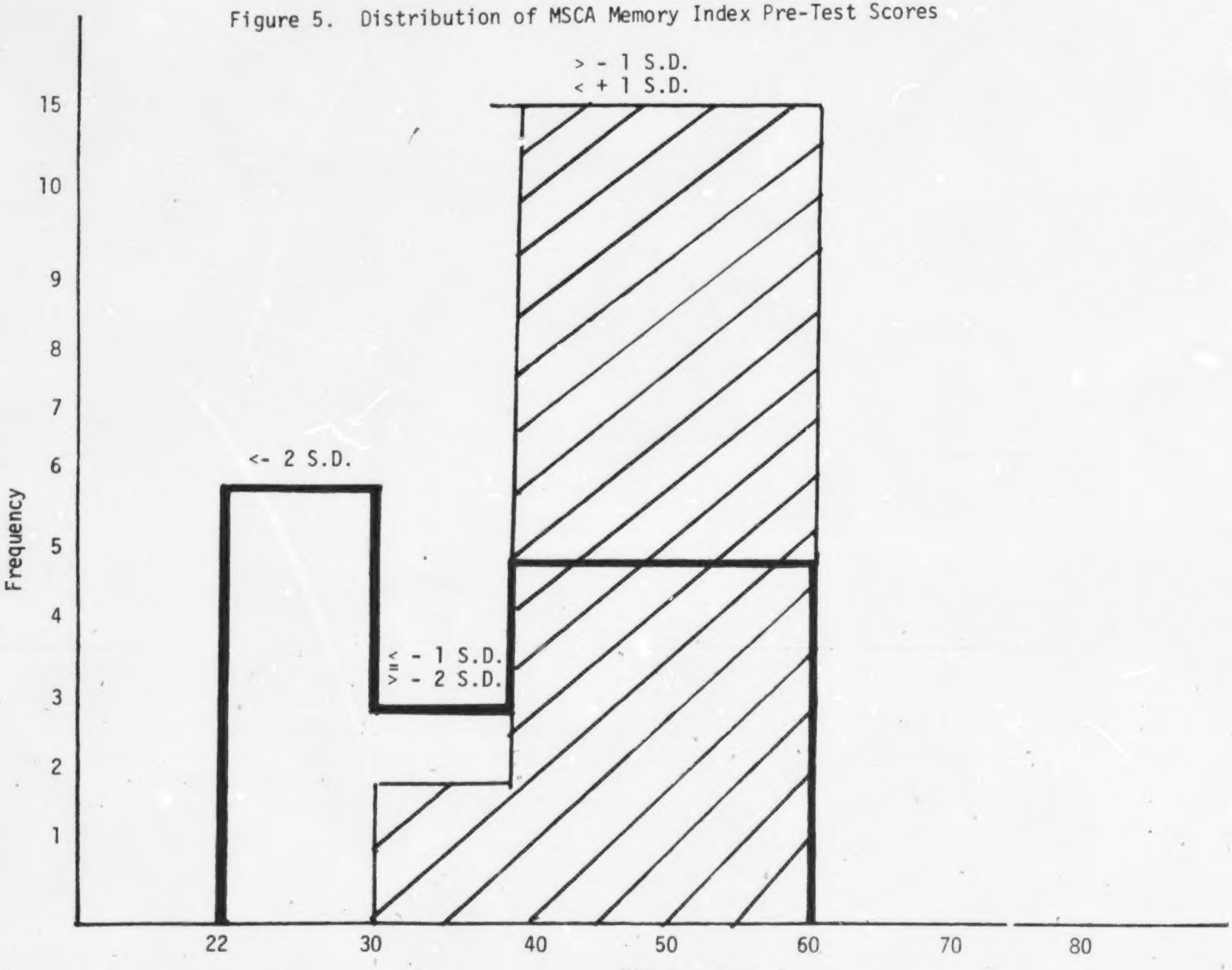
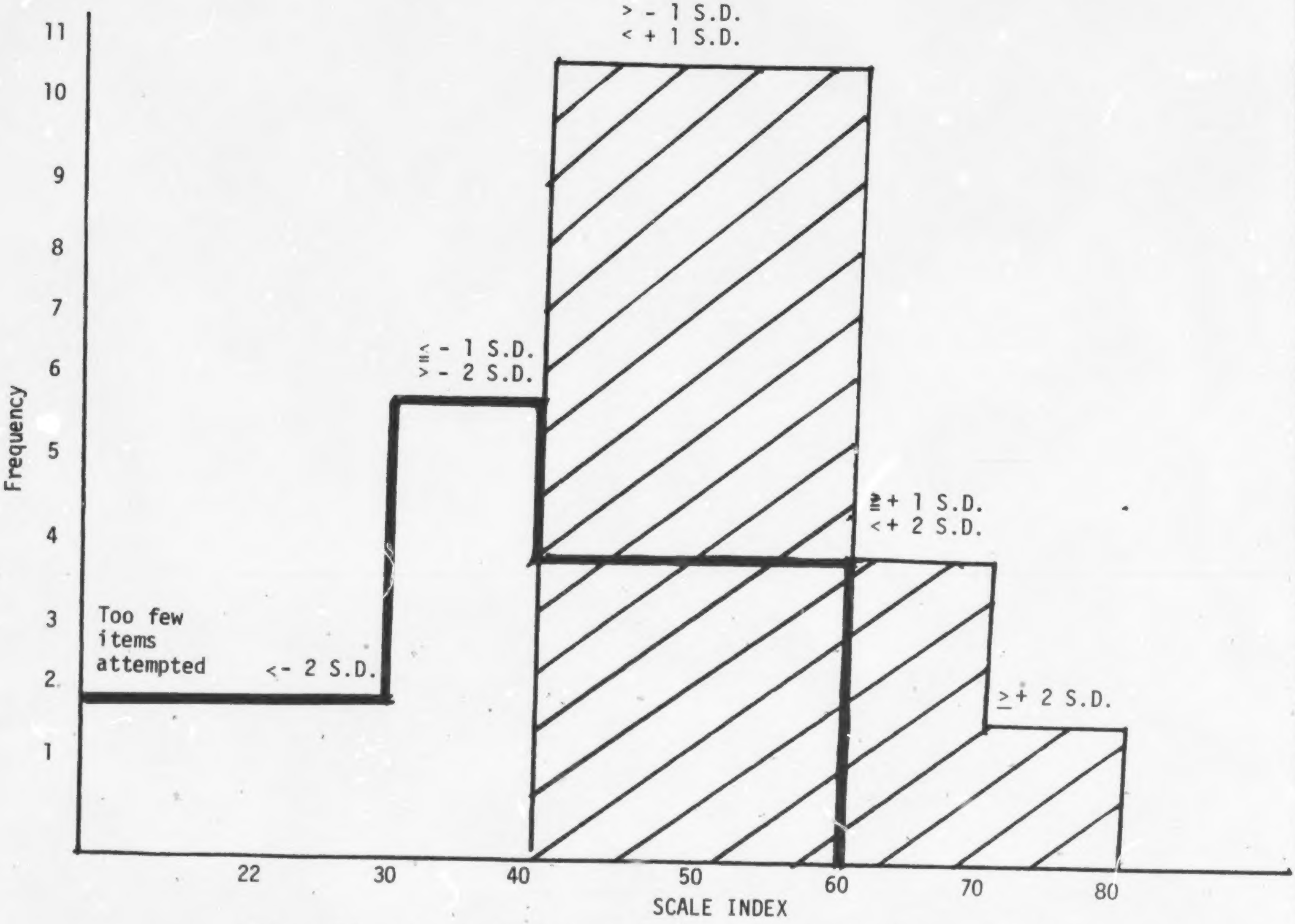


Figure 5. Distribution of MSCA Memory Index Pre-Test Scores



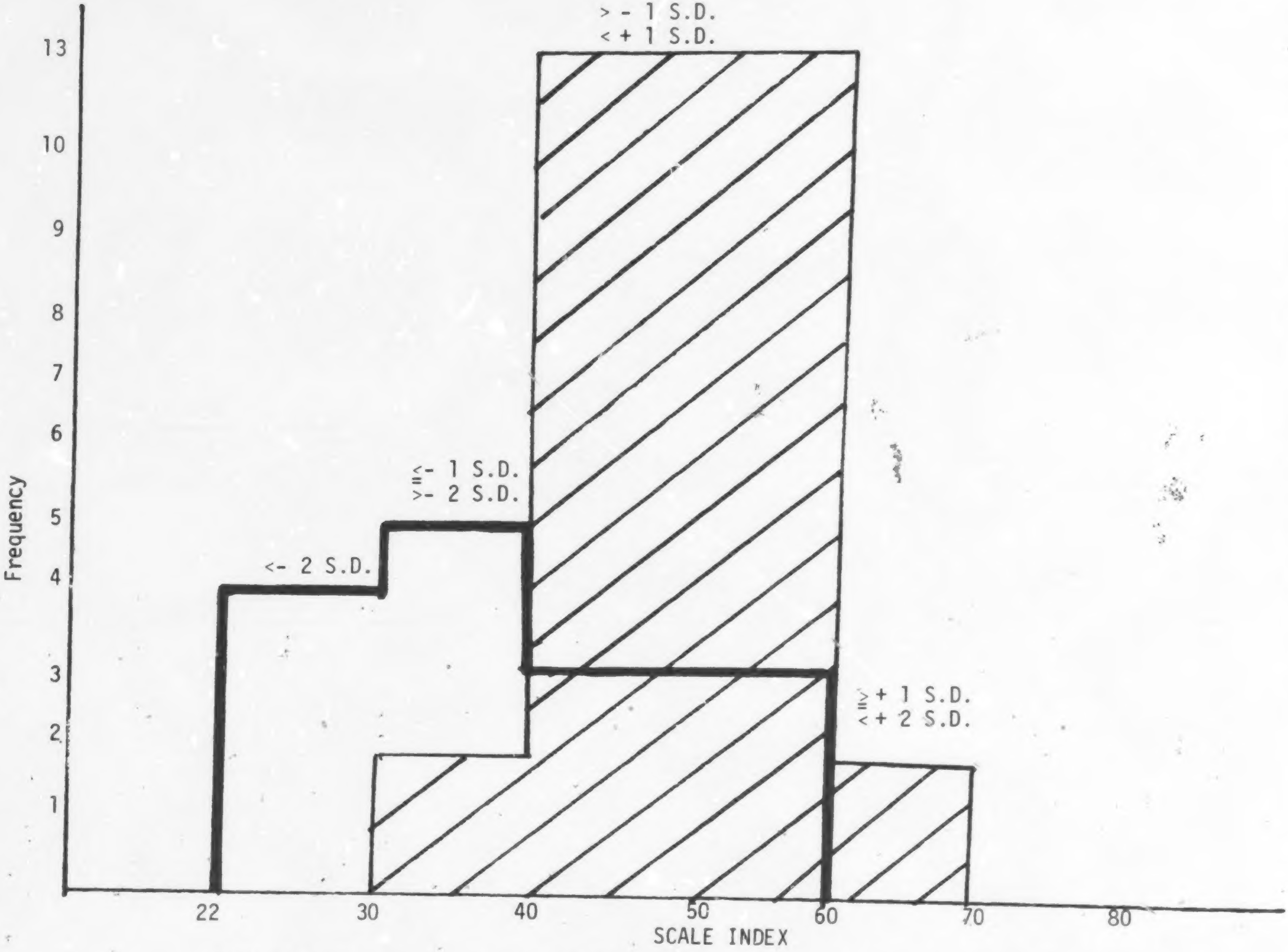
(Heavy lines denote Special Needs; Diagonals denote Non-Special Needs)

Figure 5a. Distribution of MSCA - Memory Index Post-Test Scores



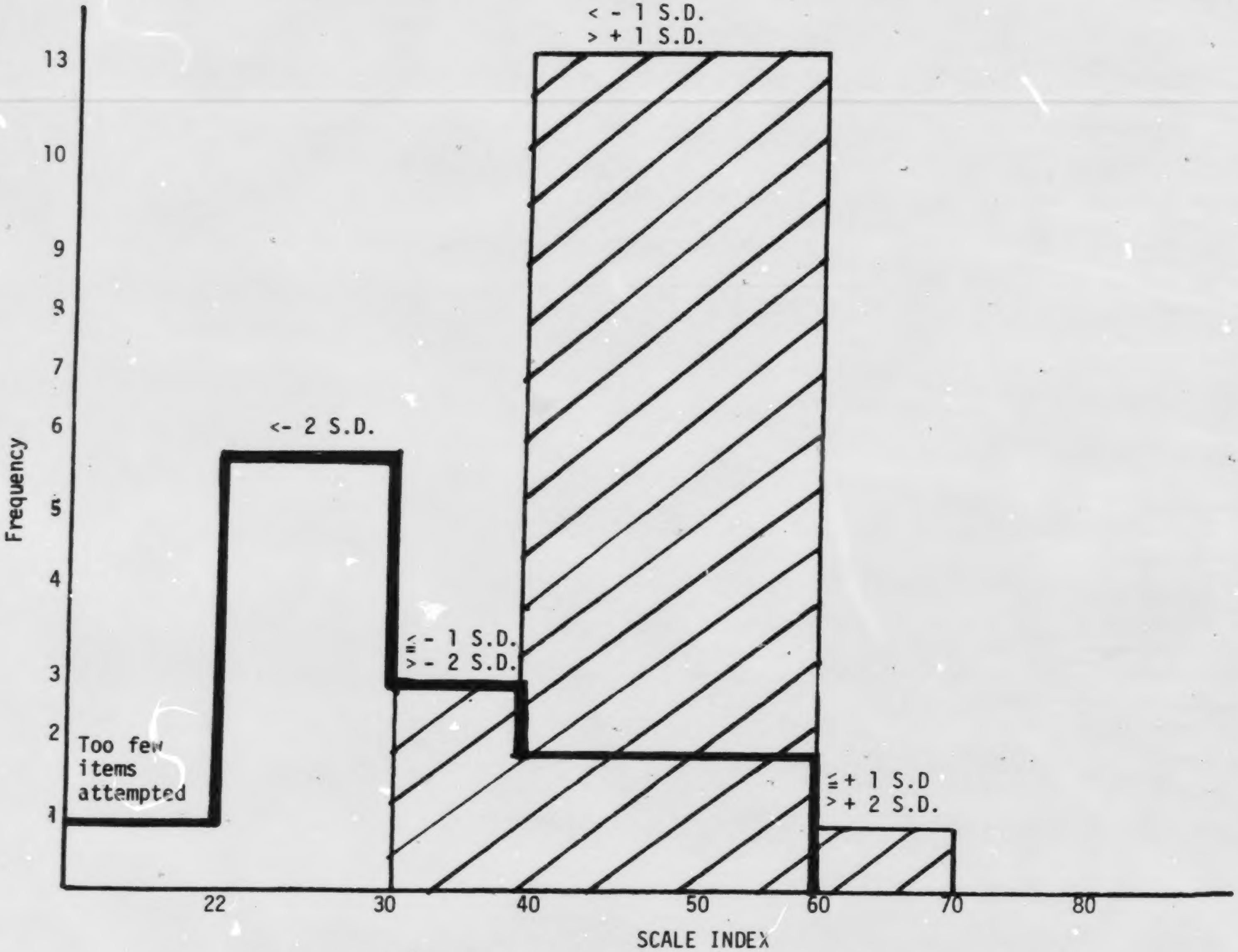
(Heavy lines denote Special Needs; Diagonals denote Non-Special Needs)

Figure 6. Distribution of MSCA Motor Index Pre-Test Scores



(Heavy lines denotes Special Needs: Diagonals denote Non-Special Needs)

Figure 6a. Distribution of MSCA - Motor Index Post-Test Scores



(Heavy lines denote Special Needs; Diagonals denote Non-Special Needs)

APPENDIX 5. STAFF EVALUATION

ELIOT-PEARSON CHILDREN'S SCHOOL

TUFTS UNIVERSITY

CRITERIA FOR FEEDBACK

The purpose of this form is to provide you with feedback so that you will be able to identify areas of your work at Eliot-Pearson that meet expectations, exceed expectations and that are in need of development. You should understand that the overall evaluation generated by this form is not final or summative. Rather, it is intended to assist you in maintaining your strengths and developing new areas of competence. Hence, this form represents but one aspect of a process of growth and development. Other aspects include developing a contract for working on certain specified areas; agreeing on a plan for support and assistance; and filling out this form again at a later date.

No one is expected to perform all aspects of this job in a uniform manner. Each of us has strengths and weaknesses. We are seeking, in general, a balanced set of abilities. Above all, we value growth and honest goal-directed effort.

We expect the stages of the evaluation to be as follows:

December: 1. Feedback forms filled out by you as self-evaluation, as well as by us.

2. In a meeting we compare our responses and establish a contract concerning what will be done by you, by us, and when,

January:
February: 3. Contract is implemented.

Late
February: 4. Forms are filled out once more.

5. Contract is amended or continued.

	Area of Strength	OK	Needs Development	Comments
A. Classroom Teaching				
1. Ability to keep children physically well, cared for, safe and in control of themselves.				
2. Ability to appreciate, enjoy, and respect children.				
3. Ability to respond to and be supportive of children's affective needs.				
4. Ability to individualize instruction for specific children.				
4a. Sensitivity to the needs of special needs children.				
4b. Thoughtfulness about the integration of handicapped children.				
4c. Ability to generate and state clear instructional objectives concerning socio-emotional, cognitive and motor development.				
5. Attention to process as well as product in the classroom.				
6. Ability to plan curriculum organically.				
7. Demonstration of an understanding of child development and its relationship to classroom planning.				

	Area of Strength	OK	Needs Development	Comments
8. Ability to create a suitable physical environment that enhances children's development.				
9. Ability to create a supportive and flexible classroom routine.				
10. Ability to conduct meaningful and cohesive whole group experiences.				
11. Ability to anticipate and manage out-of-classroom responsibilities related to parents, children and students.				
B. Working with Parents				
1. Ability to be supportive of parent's needs.				
1a. Sensitivity to the specialized needs of parents of handicapped children.				
2. Ability to be constructive concerning problem areas pertaining to their child.				
3. Willingness to communicate frequently, openly and honestly.				
4. Willingness to be responsive to a parent's ideas and desires.				

	Area of Strength	OK	Needs Development	Comments
5. Ability to demonstrate concern and appreciation for parenting.				
6. Professionalism concerning a family's privacy.				
C. Working with Students and Assistant Teachers				
1. Ability to establish meaningful goals with students and assistants.				
2. Commitment to preserving time for individual and team meetings.				
2a, Ability to be constructive, analytical and reflective concerning the student and assistant's experience.				
2b. Ability to communicate child development principles and issues in appropriate situations.				
3. Awareness of necessity of modeling exemplary teaching skills to students and assistants.				
4. Willingness to work within a team concept,				
5. Awareness of the necessity of students' participation in class time and in classroom planning.				

	Area of Strength	OK	Needs Development	Comments
6. Willingness to communicate regularly with supervisors and to complete progress reports on students.				
D. The Program as a Whole 1. Ability to display productive and cooperative interpersonal skills with other Children's School staff members and with Department faculty.				
2. Ability to understand the school's rationale for the way children are treated, the open education framework and the mainstreamed program.				
3. Willingness to pursue effective and appropriate communication channels within the school and department as a whole.				
4. Willingness to identify and to adopt a "problem-solving attitude".				
4a. Openness to receiving and imparting feedback to or from other teachers, staff, special needs personnel and administrators.				
5. Willingness to respond to the responsibilities entailed by the BEH grant.				
6. Willingness to come to meetings, be flexible about time within reason and respond to requests from outside people.				

APPENDIX 6. TRAINING MATERIALS

Project LINC
LEARNING IN INTEGRATED CLASSROOMS
Eliot-Pearson Children's School
Tufts University

DISSEMINATION SERVICES
OF PROJECT LINC

Project LINC is designed to provide training & support services of several kinds to Early Childhood educators in public school systems, private preschool, daycare and Head Start programs. These services are designed to meet the needs of administrators, specialists and classroom teachers working in a mainstreamed setting.

The Eliot-Pearson Children's School at Tufts University is the Demonstration Model for Project LINC's dissemination services. Eliot-Pearson Children's School is a private preschool and kindergarten that integrates children with a wide variety of mild and moderate handicapping conditions into open classrooms.

Project LINC's Dissemination Services are designed to meet the needs of individual audiences. For example, a dissemination site may request assistance in developing the mainstreaming skills of regular classroom teachers who are not working in open classroom settings. It is the philosophical and operational disposition of the project that mainstreaming may take place in a wide variety of classroom structures. It is thus possible to provide services around the issue of mainstreaming without altering the integrity of a site's educational philosophy.

In a similar fashion, Project LINC may be requested to provide assistance in working with parents and in developing parent support systems. While there are commonalities among good parent programs, there, are also individual differences in policy from one site to another. Project LINC's training and support efforts are tailored to individual policy.

Training and support services currently available from Project LINC include:

I. Demonstration Services

The Eliot-Pearson Children's School is designed to permit direct observation of classrooms. A visit to the demonstration model includes observation in classrooms and discussion of elements of the program. In addition visitors may view and discuss a slide tape entitled "Teachers Talk About Mainstreaming".

These Demonstration Services are appropriate for administrators, specialists and teachers. A visit to Eliot-Pearson is particularly helpful for those sites either planning to develop a mainstreamed program of their own or anticipating requesting assistance in one or more areas of an existing program.

II. Consultation Services

Project staff are able to provide consultacion to administrators and/or staff of public schools, private preschools, daycare, and Head Start programs. Consultations are understood to differ from workshops in that the consulting audience already, has considerable knowledge and experience with the topic to be covered. For example a well developed Parent Program may warrant assistance in one area Consultation by Project LINC to the Parent Program Coordinator might be appropriate in this instance

III. Workshop Services

Project LINC is equipped to provide workshops on a wide range of topics. Depending on the subject matter workshops may be appropriate for administrators specialists teachers or all three groups

Workshop topics may include issues in mainstreaming adapting materials for the integrated classroom skills in individualization informal assessment etc

Workshop services are frequently most appropriate for sites whose mainstreaming efforts are already underway.

IV Longterm Training and Support Services

Project LINC s most comprehensive dissemination service is a one year systematic training and support commitment Longterm Services includes 6 months of training and 6 months of support to a site Involved personnel may include classroom teachers of pre school or kindergarten aged children or the group may include administrators and specialists from the site

The 6 months of training focuses on pertinent issues for the teacher or administrator involved in developing or running a mainstreamed program The procedures vary slightly for teachers and administrators

A Teacher Training

1. Teacher training manual consists of written materials of two kinds
   a issues in mainstreaming individualization
   prescriptive teaching techniques
   informal assessment procedures
   remediation with attention to individual strengths

   b skills to build on
   language and speech development
   affective development
   effective curriculum development

2 Consultation
Consultations by Project LINC dissemination personnel take place on a regular basis in the teacher trainee's classroom Approximately 15 hours of individual contact for each teacher is provided over a 6 month period
Consultations have the following purposes
a providing demonstration for skills and knowledge acquired through the teacher training manual and work shops
b Providing individual assistance in dealing with issues in mainstreaming within the context of the teacher s own classroom
c. Providing the opportunity for process evaluation of the training plan as it is unfolding.

3. Workshops
   3-5 half day workshops are held over a six month period. The workshops are designed to correspond with the material covered in the Teacher Training Manual and the work done in the on-site consultations.

   The workshops address themselves in detail to areas of concern for teachers of mainstreamed classrooms. Each workshop provides knowledge, a demonstration of skills, group practice of skills related to the topic and an action component to be undertaken by the teacher in her own classroom. The activity is then discussed during consultation visits.

B. Administrators Training

Project LINC is able to provide two kinds of services to administrators:

1. Administrator's Training Manual
   Consists of written materials designed to aid administrators who have mainstreamed classrooms under their jurisdiction. Some of the issues considered include:
   a. providing staff for a mainstreamed classroom
   b. developing and implementing parent programs
   c. staff training and support
   d. inservice models for mainstreamed programs

2. Administrators Seminars
   In some cases a site may determine that assistance with administrative and specialist roles and duties is desired. Project LINC would be able to provide one or more seminars focusing on a particular issue as it relates to the specific problems encountered by an individual site.

6 Month support services have as their purpose additional assistance to sites that are developing an internal network of support for ongoing mainstream efforts.

Support activities vary from site to site. They may include assistance to former trainees in their efforts as trainers of other members of the staff. In another site support may involve the provision of periodic advisory and consultation service directly to personnel who have completed the training program.

Project LINC is funded by the Bureau of Education for the handicapped (HEW)· participating schools are under no financial obligation for these services.

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Project LINC
Learning in Integrated Classrooms
Tufts University

PARENT AND FAMILY PARTICIPATION PROGRAM

Eliot-Pearson Children's School
1977-78

Introduction

The history of early intervention programs has demonstrated that classroom intervention is not sufficient for significant longterm change in children (Bronfenbrenner, 1974). Children receiving followup services through carry over programming in the home and family support show longer term gain than those who do not receive such home-based services.

For early childhood programs attempting to provide experiences that will assist the developing child over a long period of time a critical programming element is thus parent/family participation and support.

Parent involvement strategies are an important aspect of the Eliot-Pearson Children's School demonstration mainstreaming program. Parents of nonhandicapped as well as handicapped children in the school may avail themselves of a variety of services.

In the case of parents of special needs children a number of general principles guide the school's actions (see Jordon et. al., 1975):

1. An effort is made to involve parents as much as possible in their child's program, from evaluation through classroom procedures.
2. A realistic management plan is made part of the child's initial assessment and is then implemented with the help of the teacher and Special Needs Coordinator.

3. Parents are informed of useful community resources and local parent organizations.
4. School reports are written in clear, jargon-free language; these reports are shared with parents during conferences.
5. It is made clear to parents that no diagnosis is final and unchanging; diagnoses and labels are useful only to the extent that they facilitate teaching and remediation. They are subject to alteration as more is learned about the child.
6. Parents are given assistance in thinking of life with their child as an ongoing, problem-solving process -- as is the case with non-disabled children.
7. Parents are helped to recognize their child's abilities and assets, as well as their child's disabilities and deficiencies. What a child can do is as important as what he cannot do.

Direct Services of the Demonstration Project

1. Home Visits. Initial home visits are made by the special needs resource teacher and the classroom teacher either during the summer prior to school entry or at the beginning of the school year. The parents and child have already been to the school and have met the classroom teacher and the special needs resource teachers. A visit lasts approximately one to one and a half hours. This is a time for becoming acquainted, asking and answering questions and sharing general information.
2. Individual Conferences. Individual conferences occur at least twice during the school year at minimum, although conferences

take place as often as needed. Conferences are held with the classroom teacher and the special needs resource teacher, sometimes singly and sometimes together. The midyear conference is usually led by the classroom teacher. The end of the year conference includes both the teacher and the special needs resource teacher. Many families request several conferences during the course of the year.

3. Informal Teacher Contacts. The most continuous relationship with parents is fostered by the child's teacher. Numerous contacts between teachers and parents take place. Short chats occur when parents drop off or pick up children. These contacts serve to augment the teacher's information on the child's history and adjustment to school, share the child's progress with the parents, plan mutual goals for the child. Frequent phone calls from the classroom teacher and special needs resource teachers dealing with particular issues, or just checking in to find out how things are going is another source of contact. Telephone calls occur once or twice a month with each family.

4. Evening classroom meetings, observations and parent-assistance Each teacher arranges two or three evening room meetings to discuss the classroom program. These meetings are frequently devoted to a specific topic; films and guest speakers are used at least once in each group. Parents are also invited to serve as assistants in the classroom. Most parents spend at least

two class sessions per year "parent-helping". Our observation booths are open to parents four out of every five days. Many parents take advantage of the opportunity to observe their children.

5. Coordination of Supplementary Services. Any additional services needed for the special needs children and not provided directly by the School are arranged by the special needs resource teachers. Services include speech, neurological and psychological evaluations and maintenance of ongoing communication with outside therapists or agencies working with the child and the family. Families are also accompanied by the classroom teacher or the special needs resource teacher to evaluations when appropriate.

6. Home Tutoring. The Home Tutoring Program is designed to give supplementary support services to individual children in the program and to their families. Selection of particular children for Home Tutoring is made jointly by the classroom teacher and one or both special needs resource teachers. Weekly visits are made by supervised Home Tutors who develop remedial activities for use in the home, visit with and support parents and provide activities for the parents to use at home with their child. Home Tutors make weekly progress reports and are supervised by the special needs resource teachers.

7. Out of School Placement. For children leaving Eliot-Pearson, the special needs resource teachers pursue all appropriate

educational options for the child. The search begins within the city or town in which the family resides. Visits are arranged for the special needs resource teachers and the parents to see the classroom(s) that the town is suggesting for placement. If the placement is appropriate, the classroom and teacher are written into the child's educational plan. Out of district placements are also viewed if the town does not have the appropriate services or if the parent is interested in pursuing a private placement.

8. Parent Groups. There are three types of discussion groups available at the Children's School:

a. Guided Observation Groups.

Guided observation groups occur twice a year and are led by the Associate Director of the school. Parents of each of the school's five groups are invited to observe their child's classroom on a particular day. Following an hour's observation, the group meets with the Associate Director to discuss the observation. Topics that arise include the school's philosophy and curriculum, child - child interactions, teacher behavior, the rationale for the integrated program and topics related to child rearing.

b. Support Group for Parents of Special Needs Children.

The support group for parents of special needs children meets bi-weekly under the guidance of the school's two special needs resource teachers. This group is the only parent group in the school that is restricted to families of special needs children. The purpose of this group is to create a non-threatening environment in which parents can express and explore their feelings about being parents of handicapped children. Issues are approached in a supportive manner and the group leaders take extreme care that all individuals participating in the group feel listened to and respected. Although "problem-solving" in orientation. the gorup nevertheless fulfills a therapeutic function as well. The group's purpose. schedule and format is discussed with each of the families during home visits. One parent from each family is required to participate throughout the year.

.The meetings are scheduled for alternate weeks and meet 1½ hours in the evening. The session begins with an activity that acquaints the participants with each other. or helps focus on the feelings of the moment. As activities are discussed. concerns from previous weeks. current problems and thoughts are expressed and the session responds to these and other topics. Issues discussed include: School issues such as discipline. carpooling problems. toilet training. scapegoating experience. and growth seen in the children. Home-related issues include the effects of having a special needs child on the marriage. the need for hope. negative feelings towards the child. feelings of isolation. difficulty defining future expectations. reactions of others (family. friends. strangers) to one's child and issues held in common with all families.

c. Topic-Oriented Classroom Groups.

The topic-oriented classroom groups or didactic groups are open to the parents in a particular classroom and take place approximately three times per year. The groups are mainstreamed and led by school staff members with occasional "guest" participation. Examples of issues dealt with in these evening sessions are:

a. the transition from three to four year old behavior;
b. plans for future schooling;
c. carry-over of the school program to the home;
d. workshop on making toys with your children;
e. separation and child-rearing issues.

Frequently, discussions about mainstreaming issues take place in these meetings. The school staff has come to prefer this format over the large all-school meeting format because of the greater intimacy and sense of commitment offered by the group of parents from the same classroom.

9. Advisory Council. All members of the Advisory Council are parents in the Children's School. The selection of this group of individuals, rather than a Council chosen largely from outside of the school population is deliberate. The Project Director and other school staff and Department members have sufficient contacts with the educational and therapeutic communities so that easy access to resources can be made. The Advisory Council, on the other hand, is in an excellent position

to advise the Project Director and keep the school population informed and actively involved in project activities and objectives such as developing a slide-tape for parents entitled: "Parents Talk About Mainstreaming:" developing a resource library for parents in the Children's School; forming small affinity groups (no larger than ten) to meet with other parents in the Children's School to explain the objectives of mainstreaming; and inviting public school special education administrators to Advisory Council meetings in order to try to influence policy in local education authorities.

10. Parents Organization. There is a Parents Organization which organizes activities for parents. These activities include fund raising, education meetings and staff-parent social activities. This year the school has provided a number of ongoing discussion groups for parents both of handicapped and of non-handicapped children.

References

Bronfenbrenner, U.. Is Early Intervention Effective? Washington, D.C.: Office of Human Development. 1974. DHEW Publication No. (PHD) 74-25.

Gorham, K., Des Jardins, C., Page, R., Pettis, E., Scheiber, B. "The effect on parents of the labelling of their children," in Hobbs, Nicholas (ed.), Issues in the Classification of Children. Volume Two. San Francisco: Jossey-Bass, 1975.

For further information, contact:

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Learning in Integrated Classrooms
Eliot-Pearson Children's School
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PROJECT LINC CONSULTATION EVALUATION FORM

Directions: One copy of this form should be filled in by the teacher and one by the Educational Consultant, following each topic area consultation meeting. The form is keyed to focus on areas in the consultation meeting. In order to complete the form use meeting specific objectives (listed at the beginning of each consulting meeting in the left hand column) to evaluate progress. Fill in all areas.

Respondent name: Educational Consultant Teacher

Topic Area # and title

Meeting # Today's date Length of meeting

Meeting focus areas	Objective of the meeting focus area	Check objectives which were met	List issues in each focus left unresolved	Issues to be pursued. List by whom, when how	Focus area not represented in this meeting	Value of the material and work in this focus. Include comments	Comments
1. Review				when: by whom: how:		very valuable____ somewhat____ not very____ not at all	
2. Consultant in the classroom				when: by whom: how:		very valuable___ somewhat____ not very____ not at all	
3. Teacher and consultant together				when: by whom: how:		very valuable___ somewhat____ not very____ not at all	
4. Next steps				when: by whom: how:		very valuable__ somewhat____ not very____ not at all___	

TUFTS UNIVERSITY

Eliot-Pearson Children's School
Under the direction of Eliot-Pearson
Department of Child Study

PROJECT LINC OUTREACH

Learning In Integrated Classrooms

ABSTRACT

LINC OUTREACH is a training program designed to have a major impact on the lives of mildly and moderately handicapped children, three to six years old, for whom the least restrictive alternative is the regular classroom.

In 1975-76, the Eliot-Pearson Children's School was selected by the Bureau of Education for the Handicapped as a model preschool project under the Handicapped Children's Early Education Program. From 1975-78 Project LINC developed and refined teaching strategies, skills and support systems for classroom teachers, and programs for parents of children integrated into mainstreamed classrooms. The project disseminated model components through short and longterm training experiences to a variety of early childhood personnel. LINC OUTREACH is an extension and elaboration of these demonstration and dissemination activities. It is based on the experience and knowledge accumulated during that period, and it is designed to be responsive to the sites the project will collaborate with during the next three years.

Medford, Massachusetts 02155
617 628-5000

Although mainstreaming now carries the authority of Federal law, few mainstreamed early childhood programs are now in existence. Training and in-service opportunities will assist in correcting this imbalance between policy and service capabilities.

Through in-service training and technical assistance to State Education Authorities (SEA), Local Education Agencies (LEA) and Head Start Programs, LINC OUTREACH seeks to increase the number of regular classrooms that can successfully integrate mildly to moderately handicapped children. To achieve maximum effectiveness, the project will attempt to facilitate close cooperation and coordination between the SEA, LEAs and other public and private service providers.

LINC OUTREACH has four major objectives:

1. To increase and improve appropriate educational opportunities for young mildly and moderately handicapped children and their families.
2. To increase general awareness concerning the need for early intervention and the potential benefits of mainstreamed programs implemented in a rational and responsible fashion.
3. To provide training to early childhood teachers and to potential trainers of early childhood teachers concerning the skills and knowledge required to implement a successful mainstreamed classroom program.
4. To assist in the development of inter-agency cooperation so that an effective, coordinated continuum of services to young handicapped children and their families becomes a reality.

LINC OUTREACH focuses on assistance to the classroom teacher engaged in implementing an integrated, developmentally-oriented classroom program, to locally based trainers of early childhood educators, and to administrators of programs with mainstreamed components. Five interrelated training procedures are used:

1. Written materials, including a detailed training manual;
2. Regular in-class consultation for participating teachers provided by site-based, Project trained educational consultants;
3. Monthly half-day workshops conducted by Project LINC Staff Development Specialists for participating teachers;
4. Monthly consultation seminars conducted by Project LINC Staff Development Specialists for site-based educational consultants; and,
5. Monthly local school meetings focusing on issues related to mainstreaming of concern to teachers, consultants, administrators and/or parents.

LINC OUTREACH proposes to establish productive linkages among a number of groups that have traditionally remained separate and isolated from each other. The common theme of this coordination is the development of additional services to young disabled children in mainstreamed educational settings. Establishing positive working relationships and successful programs will be a task of immense promise, and one well worth the challenge.

Part III

All grantees with a Demonstration/Service function or activity, except for 13.444 grantees who are solely supported for "outreach" activities, are to complete Tables IA, IB, and IC. All grantees under 13.451, as well as those under other handicapped programs with a Preservice/Inservice Training activity are to complete Table II. All grantees under 13.444 except those who are supported solely for "outreach" activities, are to complete Tables IIIA and IIIB.

Table IA – Demonstration/Service Activities Date
Children

Enter actual performance data for this report period into the appropriate boxes. Use age as of the time of the original application, or the continuation application, whichever is later. On lines above line 11, count multihandicapped individuals only once, by primary handicapping condition, and indicate the number of multihandicapped in line 12. Data for lines 1 through 11 are for those directly served; i.e., services to those enrolled or receiving major services, and not those merely screened, referred or given minimal or occasional services.

Type of Handicap	Number of Handicapped Served by Age					
	Ages 0-2	Ages 3-5	Ages 6-9	Ages 10-12	Ages 13-18	Age 19 and Over
1. Trainable Mentally Retarded						
2. Educable Mentally Retarded		6				
3. Specific Learning Disabilities		1				
4. Deaf-Blind						
5. Deaf/Hard of Hearing						
6. Visually Handicapped		2				
7. Seriously Emotionally Disturbed		3				
8. Speech Impaired		1				
9. Other Health Impaired		2				
10. Orthopedically Impaired		3				
11. Total		18				
12. Multihandicapped		4				

If the data in the above table differ by more than 10 percent from the data originally presented in your approved application, please explain the difference.

Project Staff Providing Services to Recipients in Table IA

Type of Staff	Number	
	Full-time	Part-time *(As Full-time Equivalents)*
Professional Personnel *(excluding teachers)*	4	1
Teachers	6	3
Paraprofessional (students)		6

Table IC

If applicable: Services to Those Handicapped Not Included in Table IA NA

Service	Number of Handicapped
Screened	
Diagnostic and Evaluative	
Found to Need Special Help	
Other Resource Assistance	

Table II

Preservice/Inservice Training Data

Handicapped Area of Primary Concentration	Number of Persons Received Inservice Training	Number of Students Received Preservice Training by Degree Sought			
		AA	BA	MA	Post-MA
Multihandicapped					
Administration					
Early Childhood	31*		39	26	
Trainable Mentally Retarded					
Educable Mentally Retarded					
Specific Learning Disabilities					
Deaf/Hard of Hearing					
Visually Handicapped					
Seriously Emotionally Disturbed					
Speech Impaired					
Orthopedically and Other Health Impaired					
TOTAL			39	26	

If data in Table II above differ by more than 10 percent from those in your approved application, explain.

OE FORM 9037-1, 8/76

* Does not include persons receiving awareness/demonstration services, or persons engaged in long-term training.

Table IIIA
Placement of Children Participating in Early Childhood Program During Reporting Period

Indicate the placement of children who left your project during the year covered by this report period.
NOTE: Count each child only once by primary type of placement below.

TYPE OF PLACEMENT			NUMBER OF CHILDREN	
			FULL-TIME	PART-TIME
INTEGRATED PLACEMENT *(i.e., in regular programs with children who are NOT handicapped)*	Nursery schools			
	Day-care programs			
	Head Start			
	Pre-kindergarten		1	
	Kindergarten		2	3
	Primary grades	First	1	1
		Second		
		Other		
SPECIAL EDUCATION PLACEMENT *(i.e., in classes only for handicapped children but situated in regular private or public school)*	Pre-kindergarten			
	Kindergarten			
	Primary grades	First	3	3
		Second		1
		Other		
INSTITUTIONAL PLACEMENT	Scheduled to remain in Early Childhood Program in coming year			
	Other *(specify)*			

Table IIIB

Cumulative number of children entered into integrated placement *(if known)* prior to this report period →	NUMBER unknown	Estimated retention rate of cumulative number in integrated placement →	PERCENT %